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Identification—Its Meaning And Mechanism

—G. N. Chatterjee

In my article, "A plea for research in the psychological aspects of teacher-shortage in primary schools in India", (Miscellany—June 1963) I made a point that personality and professional identity of a teacher are appreciably affected by accumulation of identificatory images of significant others in his early childhood. A research design to examine such a hypothesis demands a clear articulation of the meaning and mechanism of identification and I propose to do so in the present article.

MEANING OF WORDS

Our first reaction to a new word or phrase is usually to seek its meaning from others more knowledgeable than ourselves or in the case of more sophisticated persons to reach out for a dictionary. In either of these cases we are faced with more words and the process may go on and on without adding much to our comprehension. In fact such attempts to define words with more words often land us into a situation which, in the language of mathematics, may be termed 'infinite regress'. It is also not infrequently that our efforts to find a solution with the help of a dictionary lead us to a sort of a circular paradigm. A new word, the meaning of which we seek in a dictionary, is explained in terms of another word ; not understanding the meaning of this word we explore further in the dictionary to seek its meaning and we find once again the word with which we started. The fact is that words are signs and symbols and depend primarily for their significance on our reactions to them as developed through human experience and the process of factual rational thinking.

Hayakawa (1964) puts it significantly, "pattern of reactions is the sum total of the ways we act to events, to words and to habits. Our reaction patterns—our semantic habits, as we may call them—are the internal and the most important residue of whatever years of education or mis-education we may have received from our parents' conducts towards us in our childhood as well as their teaching, from the formal education we may have had.and from all our experiences". P.W. Bridgman, a renowned physisist and a Nobel-

laureate once wrote, "The true meaning of a term is to be found by observing what a man does with it and not by what he says about it." These highlight the operational and the experiential mooring of meanings of words and appear to point out why the same word may convey different meanings to different persons or even to the same person in different circumstances.

Dr. Alfred Korzybski, an authority on General Semantics, draws particular attention to the futility of seeking meanings of words in themselves and emphasizes the significance of human responses to them. A red flag or a green light at a traffic crossing does not convey a meaning either in their auditory or visual perception but rather in their meaning established through human experience of their representing symbolically 'danger' and 'safe clearance' respectively. In this connection it may not be inappropriate to make a mention of Korzybski's concept of 'Identification Reaction'. By this he means to signify "the fixed pattern of responses to objects, events and words as evoked in cases of some persons who tend to identify (treat as identical) all occurrences and different cases that fall under the same name".

Thus a person with hostile identification reaction to, say, 'Brahmin', may think of all 'Brahmins' as bad, sectarian and so on. The moment he knows that a person is a 'Brahmin', he requires nothing more to be stated. His hostile identification reactions get the better of him and cloud his reasoning. 'Identification', concludes Korzybski "is something that goes on, in the human nervous system". 'Out there' are no absolute identities. This is an obvious truth which can hardly fail to impress any person. And yet the person with a hostile identification reacts in the way described above without any questioning in his mind.

MEANING OF MEANING

This takes us to the more basic consideration of the meaning of meaning itself. Different disciplines attack the problem in different ways with a view to arrive at a definition. Thus sociologists and anthropologists define meaning in terms of the common features of the situations in which a sign is used and the activities which it produces. Apparently this tells little of the behavioural principles operating within the human organism which brings about such correlations. Charles Morris (1946) makes a classification of meanings of meaning in the following manner : (a) Pragmatical meaning—relation of signs to situations and behaviour. (b) Syntactical meaning—relation of signs to other signs in a message matrix and (c) Semantical

meaning—relation of signs to their significates. The pattern of stimulation which a sign evokes is not identical with that which the signifie may evoke. The word-stimulus 'Spade' is not the same as an object-stimulus 'Spade'. And yet the sign 'Spade' as a stimulus does elicit behaviours which are, in some ways, relevant to the signifie, a capacity not shared by an infinite numbers of other stimulus patterns that are not the signs of the object. So the Psychologist or an educator desires to know how does a stimulus which is not the signifie becomes sign of that signifie. To him the problem of meaning is primarily "(a) the general nature of the meaning response and the process by which it is acquired and (b) the specific contents or components of this response". Flavell (1961). Meaning, obviously, is a mental event taking its cue from the sign or the signifie and leading to overt or covert responses. But the important point is that a satisfactory theory must bring out the inter-relationship between these levels of discourse—association between signs and ideas. This finds elaborate articulation in the 'mentalistic view' of Ogden and Richards (1936) in their famous book, Meaning of Meaning. In emphasising the essential representational character of signs they pin-point the learning and experiential criterium and the absence of any direct connection between the signs and the things they signify. They theorise that the process which mediates relation between the signs and their significates is a mental one.

According to the Behaviourists' School of thought, on the other hand, signs achieve their meaning through the Pavlovian principle of conditioning. The signifie is the unconditioned stimulus and the sign, the conditioned stimulus. The latter acquires the meaning originally associated with the former. The inadequacy of such a view becomes apparent as we see that the sign seldom evokes the same overt responses as those of the signifie. However, this points to a new line of approach from which Morris elaborates his theory of meaning. He seeks his explanation in the behaviour of the sign-using organism. His definition may be summed up as "Any pattern stimulus which is not the signifie becomes the sign of the signifie if it produces in the organism a disposition to make any of the responses previously elicited by the signifie". This line of thinking finds its most sophisticated expression in Osgood's (1957) theory of meaning as "a representational mediation process". According to this, a signifie, say a 'Spade', elicits a complex pattern of total behaviour including 'automatic as well as skeletal reactions'. When some other stimulus such as a visual perception of the word 'spade' or an auditory perception of the same word 'spade', accompanies or antedates the signifie it is assumed that the new stimulus becomes conditioned to some distinctive portion of the total object reaction,

this portion coming to function in behaviour as a representational mediation process. It is called representational as it evokes part of the same behaviour that the thing signified produces and a mediation process as the self-stimulation it produces can become associated with a variety of overt, adaptive acts which 'take account of' the thing signified. Psychological meaning is identified with the representational mediation process. Considered from this point of view, which appears to be more rational and acceptable, the meaning of identification may be sought in the representational mediation process of the subject and the model and it may be expressed as indicating a very high measure of identicalness between the patterns of meaning used by the subject and the model as a frame of reference. It may not be out of place to mention in this connection that a very vigorous and substantial theory of meaning was initiated in India more than 2,600 years ago. This goes by the name of Sphota-Vada. Although it has not been possible to establish exactly as to who was the originator of this theory, the name of Patanjali, the great exponent of Yoga-philosophy is definitely associated with this theory. Rao (1962).

SPHOTA-VADA

'Sphota' is derived from the root 'Sphut' which means (a) 'Splitting' (b) 'bursting into view' and 'manifesting'. An element of suddenness and unanalysability of the discrete stages preceding the final stage of meaningfulness appears to be inherent in all these aspects. 'Sphota' is traditionally understood to mean (a) manifestation of a totality and (b) emergence of meaning from such a totality. And in these respects, a remarkable similarity between the 'Sphota' theorist of antiquity and the Gestalttists of the modern era is noteworthy. Patanjali in his 'Vyakaran Mahabhasya' elaborates his exposition of the psychological nature of 'Sabda'—word. In distinguishing between a sign and noise, he brings out the symbol function of the former and emphasises that a word implies detection of a sign therein. Thus though the word is sensed through the organ of ears or eyes, its meaning is apprehended by the mind and this, according to him, is the most important stage in the process of meaningfulness. The constituent units of the word may be sensed severally but the meaning is only perceived by the mind out of their totality through a mental process of integration. He asserts that without this psychological processing there can be no word ; at best, there can be a noise. The mental organisation of the elements constituting a word which conveys a meaning is really the word. The audible or the visual form which it assumes for purposes of communication is according to him of secondary importance. He further asserts that "consci-

ousness remains in subtle speech and its attempts at expression result in word". Thus according to him, word is a psychological event both in its origin and its apprehension.

Kumarila Bhatta, another great scholar of ancient India, however, upheld the associationists' view of the 'Mimangshakas' and explained his theory of words on this line in his book 'Slokavorthika'. Controversies raised by great scholars like Mandan Misra, Vachaspati Misra and Jayanta Bhatta were carried on for centuries by their disciples and others and it was not till the seventeenth century that 'Sphota-vada' gained a stable acceptance through the able and lucid exposition of Nagesh Bhatta who brought out very forcefully the essential ideas of indivisible unity in apprehension. It outlines a theory for word formation and its symbol function. In its ultimate analysis it is a cognitive process in which the discrete auditory or visual sensations play their part only to the extent of revealing an integrated and significant whole to the experience, which constitutes meaning of the word. It has, thus, a psychological, in addition to a physiological base. The subjective character of 'sphota' is prominently brought out and the exponents emphasize three factors in the process of understanding (a) the presentational data—'dhmani' (b) word—'Sabda' (c) meaning—'artha'. The sensational data, it is true, produce the word but they certainly do not generate the meaning. According to Bharatrhari the word itself is transformed ('vivartate') into meaning, the relationship being that of signifier-signified and not that of generator-generated, Rao (1962).

It is, indeed, significant that these early intellectual speculations on 'meaning' hinged on empirical moorings even though their later developments failed to attain a logical superstructure on empirical lines and slipped into fuzzy metaphysical abstractions.

IDENTIFICATION

The term 'Identification' finds frequent use in the literature of various disciplines in a wide variety of contexts. Its use has often been rather vague and generalised. As a result it becomes difficult to get a precise and definite meaning of the term. It has been interchangeably used with other concepts such as imitation, introjection etc. and very often a particular aspect of this complex process has been so stressed as to constitute the whole of it. There has also been a confusion about the process-product aspects of this concept. Some consider it to be a process, out and out, while others seek to establish it as a product. A natural scientist makes use of the term in the sense of isolating or locating an element, a plant, a species and so on.

while a criminologist uses the same term in the sense of spotting a crime or apprehending a criminal. Even though its use appears to be less discursive and more unidirectional in the fields of psychology, psycho-analysis and sociology, involving in all cases a sense of identicalness and a marked affective tone, its exact significance or its precise definition is still evolving. In fact need for a clear conceptionalization of identification has been keenly felt by authorities in all these fields and a number of symposia have been organised from time to time to thrash out the issues involved ; one was held in 1953 at Cleveland, U.S.A., under the chairmanship of Dr. Joseph Adelson. The topic for discussion was 'Identification concept and the theory of personality and psychopathology.'

Psychologists, psychoanalysts and social scientists appear to have also used the term identification to refer to various phenomena such as empathy, sympathy, altruism, vicarious living, loyalty to persons or causes and even conformity and submission.

Symonds (1946) states that ".....identification takes place when one person copies another person. In this sense it is practically synonymous with imitation". Even though he seeks to elaborate his ideas by drawing a distinction between identification and imitation in terms of action of the entire personality in identification and isolated skills or acts in imitation, his treatment fails to give a clear insight into the concept.

According to Young (1953) "Identification may be defined as the taking over of the acts, tones of voice, gesture or other qualities of another person and making them temporarily or permanently one's own. The whole process obviously move from external imitation towards an internal acceptance.....The important thing to note, however, is the shift as in other learning, from external adaptation to that which involves a reorganisation of the internal life—thought and emotion".

Though worded differently, a basic similarity may also be discerned clearly in the writings of Cameron and Magaret (1951). "By identifying we mean reacting to the attributes of other persons, groups, objects and symbols, as if these attributes were also one's own".

Kagan's (1958) definition too is on the same line even though with a greater attempt at precise articulation. 'Identification', according to him, is "an acquired cognitive response within a person(s). The content of this response is that some of the attri-

butes, motives, characteristics, and affective states of a model (M) are part of subject (S)'s psychological organisation. It, therefore, implies that the S. may react to events occurring to M as if they occurred to him". He goes further to explain that it is not an all-or-none process but that it may vary in strength, thereby showing differences in the degree to which a subject believes that the characteristics of the model, whether assets or liabilities, belong to him. Besides he may be identified to various degrees with a variety of models. According to him motives and reinforcements are governed by the following assumptions. Initially the subject perceives that the model possesses or commands goal-states and satisfaction which he craves for. This results in an affective urge to possess them. He believes that if he were similar to the model he would command the desired goal-states and so seeks to possess the characteristics of the model by copying. Thus a child perceives her mother, feeding him, restraining him, availing things out of his reach and punishing him as and when she deems fit. He feels he may possess these powers and goal-states if he were his mother and seeks to achieve them through identification. Social environments often provide reinforcement to the child to be similar to the model by possessing the positive and desirable attributes of the model. Identification responses, that "some of the characteristics of the model are mine", are reinforced each time the child perceives or is told about the existing similarities between himself and the model. He asserts that motivation to command or experience desired goal-states of a model is salient in the development and maintenance of identification, two major goal-states being (a) mastery of the environment (b) love and affection and that a major motive for identification appears to be a desire to experience positive affective states of the model saliency. In fact Freud (1949) too, suggests that each perception of similarity adds to the strength of identification : ".....it may arise with every new perception of a common quality shared with some other person who is not an object of sexual instinct. The more important this common quality the more successful may the partial identification become". It is, however, important to note that maintenance of identification demands not only a perception of similarity but actual experience of some of the goal-states desired affectively. In case a sustained command of such goal-states or positive affect is not vicariously enjoyed or experienced, identification fails to be established and the temporarily activated responses die out just as a good habit does in the absence of positive reinforcements.

Freud made a distinction between what he termed 'primary' and 'secondary' identifications. "Initial undifferentiated perception of an infant in which an external object is perceived as a part of the self" was referred to by him as primary identification. Secondary identi-

fication according to him begins only after a child discriminates a world of objects from the self. He believed that in order to reduce the anxiety over the anticipated aggressions or rejection from the same sex parents, the child identifies with him/her aiming simultaneously at the vicarious enjoyment of affection of the opposite sex parent. He speaks of identification "as the earliest expression of an emotional tie with another person" and states that "Identification endeavours to mould a person's own ego after the fashion of the one that has been taken as a 'Model'" Freud (1949). Such description appears to suggest that Freud looked upon identification as a process rather than a product. But at other places he appears to have viewed it as a product. Thus he asserts at one place that identification has taken place at the point where the super-ego takes the place of the parental function. It appears that his conception of identification has become unnecessarily complicated being bound up too closely with his whole system of psycho-analysis and more so with the Oedipus complex as a frame of reference.

Stoke (1950) gives the following description in his efforts to clarify his notions of identification. "A child gives its emotional allegiance to one of its parents and tries to duplicate in its own life the ideas, attitudes and behaviour of the parent with whom it is identifying". Hendrick's (1951) description of identification is also on similar lines even though he points out an additional aspect of conflict. "...identification....is always the consequence of an emotional relationship to another and one which is ambivalent for the provocation seems to be always reducible to experiencing some kind of envy of the power of one who frustrates". Stokes criticises Freud for confusing the nature of identification by using Oedipus complex as a frame of reference. But his own thinking does not appear to have been free from Freudian bias or else why is his insistence on 'emotional allegiance to one of its parents' only and why not to both the parents or to others though in respect of different characteristics. It must, however, be pointed out that the process-product controversy has characterised almost all the treatments of this concept.

A survey of existing literature on identification brings out that the problem in general has been mainly attacked from two different angles namely (a) social learning theory (b) personality development theory. Contributors in the field of (a) appear to have viewed Identification more as a process and concentrated on the question of 'how' this take place while those in the other area appear to have viewed Identification more as a product and concentrated their attention on the question of 'what' is incorporated in the personality through

identification. Another important fact that this survey reveals is that while a close similarity exists in the description of identification considered under personality theories, a large number of divergent learning conditions have been proposed by different contributors as antecedent variables for identificatory behaviours in the other area. (Freud, A. 1946, Freud, S. 1949, Klien, 1949, Mowrer, 1950, Parsons, 1955, Sears, 1957, Kagan, 1958, Maccoby, 1959, Whiting, 1960).

Identification is characterised as a change in the personality structure by Mowrer (1950). In quoting Murry who gives an example to describe formation of super-ego in his son.... 'He had taken an infinitesimal part of me inside himself', he appears to support the stand that identification is a product—an accomplished fact and the result 'of taking into the self'. On the other hand, his categorisation of 'developmental identification' in which the child learns ego functions like those of his parents and of 'defensive identification' in which the child accepts the standard of his parents as a means of pleasing them and of controlling his own impulses points clearly to his viewing identification as a process.

Similar qualitative distinctions have been advanced by other theorists like Slater, Bronson and Wright. Thus Slater (1961) speaks of 'personal' and 'positional' identification. According to him "Personal identification is motivated primarily by ego's love and admiration for alter....The child who identifies in this way with a parent is saying in effect, I want to be like you. If I were you, I would have you (and your virtues) with me all the time, and I would love myself as much as I love you....Positional identification involves the identification of ego with the situation or role of alter....It is motivated not by love but by envy and fear. The child who identifies with a parent in this way is saying in effect.' I wish I were in your shoes. If I were I would not be in the unpleasant position I am in now if I wish hard enough and act like you do I may, after all, achieve your more advantageous state."

Bronson's (1959) treatment of this concept in terms of 'ego' and 'infantile' identifications follows, in substance, comparable analysis of the motives underlying the qualifying properties of these types. Much earlier than these theorists, however, Ausubel (1952) conceptualised identification in terms of similar types basing them on what he termed 'Satellization' and 'incorporation'. According to him the child accepts parental values due to his loyalty to supporting parents in 'satellization' while in 'incorporation', he accepts parental values due to their "objective capacity to enhance ego status—without forming any emotional tie to the model". He considers 'satellization'

as normal though not universal in personality development. The dualistic formulation of the theory of identification appears to be based on the dichotomy of parental love and support on the one hand and parental threat and power on other and to take its origin from Freudian formulation of child's 'need to have' and 'the need to be' (Freud, 1949).

In his article on Identification and becoming a teacher, Wright (1959) also develops his theory of identification in term of motives involved. His 'Identification to possess' is the first type of relationship between the self and others in the developmental process and in that respect resembles Bronfenbrenner's (1960) 'anaclitic' type of identification. This is parental affection and support based as opposed to his 'Identification to placate' which is parental threat and power based. This latter finds its parallel in Branfenbrenner's 'identification as a function of fear of the aggressor', Mowrer's 'defensive identification' and Kagan's 'prohibition learning'.

Sanford (1955), however, holds a different view and considers these processes as a function of introjection. According to him 'actions of the conscious ego' for certain common pattern of everyday social behaviour should not be classed under identification as he feels that identification proper is an 'unconscious or at least more or less unconscious process'. Tolman's (1943) notion of identification, on the other hand, embodies three processes, all on the conscious level : (a) the process wherein an individual tries to copy, taking as a model or a pattern some other older, admired or envied individual (b) adherence of an individual to any group of which he feels himself a part (c) the acceptance by an individual of a cause.

CONCLUSION

In fine, we may review the present status of identification with the following justifiable assertions

- (i) (a) Whatever identification is, it implies a relationship between a subject and a model.
(b) The relationship is invariably characterised by a strong affective tone.
(c) The subject 'takes on' or 'takes in' some of the attributes and qualities of the model either permanently or temporarily.
- (ii) The various definitions and descriptions of identification appear to follow three distinct lines of approach. To borrow

Lazowick's (1955) nomenclature, we may name these categories as (i) Pseudo-identity—those given by Young, Cameron and Magaret and Kagan (ii) Imitation—those given by Symonds and Bandura (1962) and (iii) Change in personality structure—those given by Freud, Mowrer, Murry, Stokes, Slater etc.

(iii) The various definitions and descriptions of identification all go to show that it can be best understood as a process of interpersonal relationship or the result thereof. As to the underlying mechanism, various theories have been advanced depending on unitary versus dualistic conceptions of identification. The former assumes that the major dimension of identification is one of the extent of similarity between the subject and the model, inspite of the apparent complexities. Many researches have been conducted under this assumption to establish commonality of different measures of subject-model resemblance. The main point of investigation therein has been the question of 'how much' rather than 'what kind' which appears to be the primary interest of investigations under the dualistic conception. In such conceptionlization, qualitative distinctions between affection and support-based versus threat and power-based outcomes of interpersonal relations between subject and model have been studied and high-lighted. Those with an orientation towards social learning theory hold that both love-based and power-based identifications play a part simultaneously and may even function as complementary aspects in structuring personality. Mowrer (1950), Mussen & Distler (1949) and Kagan (1958) develop their thesis on these lines. There are others, however, who theorise that the personality structuring results either from threat-based or love-based indentification. Thus Slater (1961) concludes that 'positional' (threat-based) identification occurs in so far as 'personal' (love-based) identification has failed to occur and Ausubel (1952) draws pointed attention to the fundamental difference in personality structuring of children who have passed through a period of satellization and those who have not.

Whiting proposes a theory of identification, according to which the consumer status of an adult plays the central role in the process and name it as 'status envy' theory (1959 ; 1960). He points out that the child competes unsuccessfully with an adult for affection, attention, food and care, envies the consumer-status of the adult and finally identifies with him. In so far as this theory draws attention to a

rivalrous interaction between the child and the adult, it appears to offer some similarity with the Freudian 'defensive identification'. But while the latter builds primarily on the affectional attention of the parent only, Whiting thinks that any form of reward, material or social, may stand for the valued resource around which the rivalry grows. Writers, like Parsons (1955), Maccoby (1959) and Mussen and Distler (1959) assert on the other hand, that the controller-status and not the consumer-status is the determining factor in bringing about identification. This finds expression in the 'power theory' of social influence and has received considerable attention in experimental social psychology.

Five types of power, namely, expertness, attractiveness, legitimacy, coersiveness and rewarding power have been outlined as the main contents of the 'power theory' by French and Raven (1959) whereas Parsons and Bales (1955) have developed a 'role theory' of identification in terms of instrumental (power-based) and expressive (attractiveness, affection-based) qualities of the parents. According to this, the child is supposed to identify with both the parents, with mother in terms of expressive qualities and with father in terms of the instrumental qualities.

The reader may have noted that these theories do not make any explicit reference to the psychological processes of introjection and projection. Many outstanding psycho-analysts have, however, provided an incisive insight into the mechanism of identification on the basis of these processes.

I would, therefore, like to conclude this article with a brief reference to the same.

Frud (1949) in his essay on 'Identification' mentions about the observation published in 'International Zeitschrift fur Psychoanalyse': "A child who was unhappy over the loss of a kitten declared straight out that now he himself was the kitten and accordingly crawled on all fours, would not eat at table etc.". In 'Mourning and Melancholia' and subsequently in his explanation of super-ego formation, Freud also brings out the relationship between identification and introjection. The lost object in the case of the first and father in the case of the second are 'introjected' by the subject and identification occurs as a sequel to this. Melanie Klein (1955) goes even further and observes that "the primal internalized objects form the basis of the complex process of identification" and asserts that "introjection and projection operate from the beginning of the post-natal life and constantly interact. This interaction both builds up the internal world and

shapes the picture of external reality." However, according to her terminology, identification may be either introjective or projective. In introjective identification the person internalizes and incorporates in his own ego aspects from the 'model' while in projective identification a part of one's ego is 'split off' and deposited in the 'model', this process resulting in its turn, in identification with the model. Accordingly Freud's super-ego formation may be taken as an example of introjective identification while his analysis of group coherence in the army offers an example of projective identification : the Commander-in-charge in the army is the father and the protector, who metes out equal justice to all, maintains equal solicitude for all and loves them equally. Each soldier in the group projects 'good parts' of his ego into the general and makes him his ego-ideal. The establishment of this common ego-ideal leads to identification with other members of the group, who are all oriented similarly in their psychological attachment to their leader. In this connection Freud's example in his discussion of panic, namely "The general has lost his head and thereupon all the Assyrians take to flight" is important. The report, though false, succeeds in destroying the cohering influence of the group through the imaginary loss of the person with whom the members of the group had established projective identification. The inherent weakness of this type of identification is the danger of impoverishing the ego. And this aspect is significantly stressed by Knight (1940) in his discussion on 'Introduction, Projection and Identification' in which he concludes that "Identification is adaptive in the short-run and maladaptive in the long."

BIBLIOGRAPHY

1. Ausubel, D. P.
Ego development and the personality disorders. New York : Grune & Stratton, 1952.
2. Bronson, Wanda, C.
Dimensions of ego and infantile identification. J. Pers., 1959, 27, pp. 532-545
3. Bronfenbrenner, U.
Freudian theories of identification and their derivatives. Child development, 1960, 31, 15-40
4. Bandura, A.
Social learning through imitation. In M. R. Jones (Ed.) Nebraska symposium on motivation : 1962. Lincoln University, Nebraska Press, 1962, pp. 211-269

5. Cameron, N. & Magaret, A.
Behaviour pathology. Cambridge : Houghton-Mifflin, 1951.
(page 60)
6. Flavell, J. N.
The journal of general Psychology, 1961, 64. 307-319
7. Freud, S.
Group Psychology and the analysis of the ego. London : Hogarth Press, 1949.
8. Freud, A.
The ego and the mechanisms of defence., New York : International Univer. Press, 1946.
9. Hendrick, J.
Early development of the ego: Identification in infancy.
Psychol. Quart. 1951, 20, 44-61.
10. Hayakawa, S. I.
S. I., 1964 Span, April 1964, Vol. 5, No. 4, U.S.I.S. American Embassy, New Delhi.
11. Kagan, J.
The concept of identification., Psychol. Rev. 1958, 65, 296-305
12. Klein, M.
The psycho-analysis of children., London : Hogarth Press, 1949.
13. Knight, R. P.
Introjection, projection and identification. Psychoanal. Quart., 1940, 9, 334-341
14. Lazowick, L. M.
On the nature of identification. J. abnorm. Soc. Psychol., 1955, 51, 175-183
15. Mowrer, O. H.
Identification : A link between learning theory and psychotherapy. In, learning theory and personality dynamics, New York : Ronald Press, 1950, pp. 60-94
16. Maccoby, Eleanor E.
Role-taking in childhood and its consequences for social learning. Child Developm., 1959, 30. 239-252
17. Osgood, C ; Suci, G., and Tannenbaum, P.
The Measurement of Meaning, Urbana University of Illinois Press, 1957.

18. Parsons, T.
Family structure and the socialization of the child. In T. Parsons & R. F. Bales (Eds.) Family, Socialization and interaction process, Free Press, 1955, pp. 35-131
19. Symonds, P. M.
The dynamics of human adjustment. New York : Appleton-century-crofts, 1946.
20. Stoke, S. M.
An inquiry into the concept of identification. J. gen. Psychol., 1950, 76. 163-189
21. Slater, P. E.
Toward a dualistic theory of identification. Merrill-Palmer Quart., 1961, 7. 113-126
22. Sanford, N.
Psychological Review, 1955, Vol. 62, No. 2.
23. Sears, R. R.
Identification as a form of behavioral development. In D. B. Harris (Ed.), The concept of development. Minneapolis : Univer. Minnesota Press, 1957, pp. 149-161
24. Tolman, E. C.
Identification & postwar world of abnormal and social Psychology, 1943.
25. Wright, B.
Elementary School Journal 1959.
26. Whiting, J. W. M.
Resource mediation and learning by identification. In I. Isocoe & H. W. Stevenson (Eds.), Personality development in children. Austin : Univer. Texas Press, 1960, pp. 112-126
27. Young, Kimbale
Hand Book of Social Psychology. Routledge & Kagan Paul Ltd., London, 1953.

Measuring Aptitudes In Vocational Guidance

—S. B. Kakkar

A VITAL CONSIDERATION

One of the essential considerations in Vocational Guidance is individual's aptitude. A youngman forges ahead to become a stenographer. He may have everything required for the occupation i.e. considerable interest, good opportunity for training, money and time for training, personal qualities needed to adjust to others, and scope for employment. However, if he lacks aptitude for typing, clerical work, and drafting, it may not be possible for the vocational counsellor to push him up for a stenographer, and if on his own he happens to become a stenographer, his fitness for the job is uncertain. A graduate manifests requisite interest for being a teacher, has got the chance for training, can afford the funds and time for it, has personal qualities to get along with co-workers and children as well as employment opportunities. Still if he does not possess the aptitude for teaching, it is not possible to declare him fit for teachership. Thus aptitude is vitally necessary to determine an individual's vocational pattern. It might be argued and perhaps correctly that interest is the prime-mover or forerunner of our future occupation, but it is aptitude which gives interest to the force to become dynamic and push ahead.

WHAT CONSTITUTES APITUDE

No term perhaps has been so loosely used or misused as aptitude. People have used it interchangeably with intelligence, interest, ability or attitude. For a Vocational Counsellor it is necessary to know its true meaning. Aptitude means potentiality to learn, or perform. It is an innate capacity which is not manifested without having got some training or experience in the field concerned.

One may have a high mechanical aptitude without ever having driven a nail or assembled a toy aeroplane. High mechanical aptitude means that if a person was trained in mechanics, he would

learn quickly, and after training would become a good mechanic. Only after some training does he possesses ability in mechanics. A girl may have musical aptitude without ever having sung or played a note. If she was trained in music she would become a better musician than one who has lesser aptitude. The ability in music will manifest itself only after training. The fact that you have mathematical ability means that you can do hard sums in mathematics, the fact that you have mathematical aptitude means that you have the potential to learn mathematics. This potential or aptitude may become ability after your training in mathematics. You may show mathematical ability in the sense that mother taught you how to maintain household accounts, but your aptitude may be other than mathematical. It is therefore wise to keep in mind what aptitude is and what it is not. Bingham, said to be an authority on aptitude, does not mean something different when he says that aptitude involves ability to acquire the skill, knowledge, attitude etc. necessary for success, readiness to acquire these, and satisfaction in the job.

MEASURING APTITUDE

If two persons, given comparable opportunities to acquire a skill differ in the ease of acquiring it, or if one of them attains more proficiency than the other we can say that the one has more aptitude for that particular work than the other. It is in this sense that aptitude, like intelligence, is inferred from relative levels of achievement.

Secondly, like intelligence, distribution of aptitude approximates a normal distribution curve i.e. those few with little aptitude for the work in question lie at one extreme, those few with maximum aptitude at the other extreme, while the rest, a large number, with an average degree of aptitude for the task in question lying in between.

Thirdly, aptitude is specific i.e. one may have aptitude for book-keeping, but not for mechanical work and other trades. A high aptitude for one work but a low aptitude for the other is also possible. Those having a wide range of aptitudes can learn to do many things very well, while those having a low range can learn to do only a few things well. It is a good pointer to those who, out of sheer wishfulness, expect all their efforts to end in equal success. All of us need not expend ourselves in an attempt to reach the top where the room is rather limited. Most of us have got to be contented with moderate successes or achievements in life.

Fourthly, a test of aptitude for a vocation may be factored into
3.

a number of subsidiary aptitudes, the way a test of general intelligence is split into a variety of mental activities. That is why aptitude is measured, not by one test, but by a battery of tests.

Again, like intelligence, aptitude is a capacity and hence an intelligence test is in a way an aptitude test. That is why performance on an intelligence test is sometimes indicative of aptitude for certain fields of work especially those which require a well-defined or pre-determined degree of intelligence i.e. Army Officers, Pilots, college work etc. This is only in the sense that certain occupations require an appropriate minimum intelligence for success, so that those who show less than that minimum are weeded out in the first instance. At the same time an intelligence test does not replace the aptitude test. Those who show that minimum or above, are then examined with regard to their aptitude for the occupation they come for i.e. their mechanical, or artistic aptitude is tested. The writer observed that 82 per cent of graduates whose IQ as measured through an intelligence test on admission into post-graduate training class worked out to be 110 to 130 did pretty well in training and passing-out achievements. For that reason a good intelligence test is considered to be the best single aptitude test for scholastic aptitude. The writer also observed that 92 percent of the officer candidates, showing IQ 120 to 150, actually became officers. The intelligence test results are to be cautiously applied in vocational guidance. In no case can we earmark an individual for a certain occupation on the basis of these results. We might well counsel an individual who shows a score (IQ) of 80 that the chances are bright for him to succeed as a mechanic operator and brighter still as bricklayer, carpenter, farm worker etc. (as seen in the hierarchy of occupations classified on the basis of intelligence) and that he has sufficient ability to go into these occupations.

Aptitude should not be confused with innate capacity. One may have an IQ of 150 without having aptitude for college work. It may be that his early environments gave a negative slant on college work and college students which makes college repulsive to him. Thus his early training affected his aptitude. Nevertheless aptitudes—like musical and mechanical may be closely related to innate capacity. Again training alone will not make a musician of one whose defective ear-structure makes him unable to detect minute differences in pitch and intensity.

Aptitude and present ability are also not identical. Presently one may have no ability to drive a car, but he may have a high degree of aptitude for driving provided he receives the proper training. The

chief merit of the aptitude test is that it enables us to choose from those, who at present have no ability—to benefit from training for the work in question, those who after training will develop the ability or skill in question.

WHY MEASURE APTITUDES AT ALL

Firstly because by measuring it we can direct persons along the fields of occupation in which they are most likely to succeed and divert them from those in which they are least likely to succeed. This is what we call as 'Vocational Guidance'. Secondly by measuring aptitude we select those who are best-fitted for the jobs in question. This is termed as 'Vocational Selection'. The same tests may be used for both the fields of vocational psychology though for different purposes.

Interests too are related to aptitude i.e. those who succeed as teachers show high social interests somewhat different from those who succeed as pilots and show high scientific interests. Still a person may be interested in being an actor without having adequate aptitude for it.

How to select before training a person who is most likely to succeed in a particular vocation after training is a real problem ? Vocational counsellor solves this problem through aptitude test thereby saving a lot of money, time and labour which would otherwise be dissipated on the potentially inept individuals.

APTITUDE TESTS

Many mechanical aptitude tests have been constructed depending upon the kind of work for which trainees are selected. Some tests require one to assemble various items so as to judge his mechanical comprehension and dexterity, some require him to manipulate small objects like nuts and bolts so as to judge his comprehension of spatial relations, speed of reaction, and manipulative skill. Others require him to move his both hands accurately and rapidly to adjust the position of mechanical apparatus so as to judge his speed of reaction to complicated stimuli, his driving aptitude etc. Still others are paper-pencils tests containing mechanical problems requiring the one being tested to make a response involving a mechanical judgement.

In musical aptitude tests one sits, listens and discriminates so that his discrimination in pitch, in intensity, in rhythm, in timbre, in time and his tonal memory are tested.

Aptitude test for the purpose of vocational guidance or selection is standardised and evaluated for the job in question before putting it to use. To do so a detailed job analysis of the job in question is made, preliminary test items which may measure the psychological processes revealed through job analysis are selected, and a standardised method of administering and scoring the test developed. The test is then administered to a large number of people representing the group on which it is to be used. Finally the test is evaluated so as to see the relationship of its scores with actual success in the occupation.

A HINT FOR THE VOCATIONAL COUNSELLOR

To give vocational conselling the counsellor gives an intelligence test and then a mechanical aptitude test, compares counsellee's score in the aptitude test with that of others on whom the test was validated and finds the correlation fairly high. He can proceed as "You possess adequately high intelligence to do well in any one of these fields, but this is the field that appears to interest you more. This field requires a high mechanical aptitude and the test shows that you are not handicapped that way". He does not tell the counsellee that the latter will or will not succeed in a given work, because many other things cause success or failure besides what he measures by tests. Also he has to see the position regarding availability of training or that of jobs and may some times have to recommend the second best related to the counsellee's tested aptitudes. He should avoid giving definite predictions. Aptitude tests indicate direction not destination. Its results must never be considered without taking the counsellee's interests into account.

In vocational selection the counsellor having found an individual in the lowest aptitude-rating for a driver can say more certainly : "Some having the highest aptitude rating do succeed and you might be one of them. Some having the highest aptitude-rating do fail, and you might be one of them". Even the best aptitude test weeds out some individuals who if admitted would have succeeded. It is not possible to know who those unfortunate persons are unless we accept everyone. But if we take everyone we would be squandering a lot of money, time, power in trying to train group of whom many would eventually fail out. To avoid this wastage a few are sacrificed. The psychologist's task is to fix the significant score (below which individuals are not to be admitted) which rules out the maximum number of potential failures and the minimum number of the potentially successful. This score depends upon the number of persons needed and the number available.

Thus far human aptitude has been directed towards the industrial equipment which was taken for granted with regard to its design. Now psychologists are trying to so design the equipment that human aptitudes, as are usually available, can be more adequately utilized. This, as so many others to-day, is an example of human triumph over non-human environment.

Aptitude test or any other test cannot be arbitrarily or exclusively depended upon while individual's future is being decided. Howsoever ingenious a test may be, it cannot take the place of a trained and experienced observer, in whose hands of course it may be a boon..

Some Aspects Of Assessment Of Intelligence And Tools Employed Therein

— Neera Chatterjee

I have discussed at length the different aspects of the 'Nature of Intelligence' in the first issue of 'Miscellany'—(June, 1963). It may now be worthwhile to consider in this article some aspects of the assessment of intelligence and the tools employed therein.

Assessment in the field of education is probably as old as any system of education itself. What is important, however, is the nature of such assessment, its objectives and the conclusions that have been drawn therein. Tests or examinations in schools, colleges and public examinations are usually designed to assess the standard of attainment of different categories of students in different subjects. Their main object has been to find out how far a student has retained information imparted in particular subjects. They are obviously, therefore, not meant to gauge the human mind as a whole. Psychological tests and more particularly intelligence tests have consistently been designed with the idea of making an objective assessment of the mental make-up. In this context it may be interesting to trace here the historical development of these tests. In trying to do so it is possible to mark out two well-defined periods : first, a period dominated by attempts to analyse and classify the activities of mind on the basis of observation and introspection and second, a period dominated by the activities of the practical psychologists who, while recognising the great importance of observation and introspection in all studies of mental activity, considered these as extremely inadequate as effective tools of assessment and initiated the intelligence test movement.

It is true that assessments might have been crude, subjective and unscientific at very early stages, but the fact remains that the process has been continuing with the desirable result of greater and greater refinement.

An understanding of the mind itself and its manifestations are

prerequisites for any mental assessment. And it is in this field that Indian Philosophy has made its superb contribution. Analysis of mind in the various schools of Indian Philosophy, made more than two thousand years ago, is found to be acceptable and valid even to-day. In trying to explain the nature of mind, Katha Upanishad (Katha Upanishad 3:3 and 4) draws an analogy describing mind as the reins of a chariot, of which the soul is the master of the chariot, who sits within, body the chariot, intellect ('buddhi') the charioteer, the senses ('indriyas') the horses and their roads the sense objects. In Vedanta Philosophy 'antahkaran' (inner instruments) finds a very prominent place. This word corresponds to mind and is elaborated to have four functions, namely " (1) 'manas', the oscillating or indecisive faculty of mind ; (2) 'buddhi', the decisive state which determines that 'this is a tree and not a man'; (3) 'ahankara', the state which ascertains that 'I know'; (4) 'chitta', the store-house of mental states which makes remembrance and reference possible", (Akhilananda, 1949, Page 29). The Vedantic word 'antahkaran' appears to stand between the subject and object as the instrument of perception and enables perceiving the object as a whole, a conception which bears similarity with that of Gestalt Psychology. Sankhya Philosophy has given a detailed account of 'mind stuff' (Sankhya Philosophy; about 150 B.C.) Other schools of Indian Philosophy have also been found to make important contributions with regard to the understanding of mind in its various stages of awareness. But the aspect of practical realisation of these stages appears to have been most elaborately dealt with in Patanjali's Yoga Philosophy. These accounts, however, do not appear to make any significant mention of efforts at quantitative assessment.

Looking to the West it may be seen that first important and systematic efforts at understanding the nature of mind started with Socrates. (Ballard 1920 ; Eighteenth impression 1955). In his discussions with Sophisticus, the latter used the word 'intelligence' in place of 'wisdom' and Socrates employed his famous dialectic method to bring out the significance of the word 'intelligence' as an attribute of the mind. His disciple Plato drew a clear contrast between nature and nurture for the first time while Aristotle further developed the ideas of Plato and introduced for the first time the concepts of 'concrete activity' and 'hypothetical capacity', thus introducing the idea of mental ability. The great educationist Herbert Spencer, in his book 'Principles of Psychology', published in 1870, stressed the cognitive and affective aspects of mental life in trying to develop his theory of mind. "The fundamental capacity of cognition" he says, "progressively differentiates into a hierarchy of more specialised abilities sensory, perceptual, associative and rational, much as a trunk of a tree sprouts into

boughs, branches and twigs" (Cyril Burt, 1955). To designate this basic characteristic he revives the term 'intelligence'. These efforts, however, are conspicuously devoid of any attempt to quantify intelligence. The earliest attempt in this direction may probably be found in the works of Lavator. He tried to determine abilities from features and expressions of the face of a person, thus, for example a Roman nose was supposed to indicate an aggressive attitude (Lavator, 1772). The Frenchman Gall posed his theory of phrenology for mental measurement in 1807, (Ballard 1955) but such efforts were, however, not acceptable in general and continued to prove futile for a long time. Galton brought the questionnaire method into the field in order to try to assess intelligence. In his studies of sensory and auditory discrimination he made use of a standard set of weights of geometrically ascending order and the 'Galton Whistle' respectively (Galton 1869, and Pearson, 1914). He also studied the family history of 977 eminent people and recorded his observations in his famous book 'Hereditary Genius' published in 1869. Though not very substantial when viewed against later improvements in the quantification of human mind, these attempts do certainly stand out as fairly important landmarks in the history of the growth of intelligence tests. In 1906 Karl Pearson pointed out the inadequacy of such physical methods and brought into use for the first time, mathematical formulae for finding out the coefficients of correlation between scores of the same group on two tests and popularised the same amongst psychologists and teachers for the quantitative investigation of intelligence (Pearson 1906).

To the French psychologist Alfred Binet, however, goes the credit of giving the world the first systematic intelligence tests (Binet, 1905). He combined the method of the psychological laboratory with knowledge based on the observation of child behaviour. In 1905 he published his first scale for measurement of intelligence and in doing so drew freely from the works of Galton, Pearson and others who had measured the speed and accuracy of seeing and hearing, strength of memory, strength of hand-grip, attention span and so forth. But he emphasized forcefully that intelligence was much more than just a matter of seeing, hearing, muscle control, memory and concentration. He also realised that the normal expectation of performance of an average child of a particular age could only be determined by testing hundreds of children of that age taking care that they were chosen at random, and not from a selected group. On the basis of this idea, he, along with his friend Thomas Simon, worked for a number of years and published in 1908 a list of things one might expect normal children of various ages to do. While psychologists held this as an epoch-making achievement in the history of intelli-

gence tests, efforts were continued to evolve fresh techniques for the measurement of intelligence. In 1916 Lewis Terman brought out the Stanford Revision of the Binet Simon scale and popularised the term 'Intelligent Quotient' which has since then been found to be an extremely practical concept. With the Binet-Simon scale as the basis, various revisions have been made from time to time by workers in the field. Some of the more important revisions include (a) Goddard's Revision in 1911, (b) the Point scale of Yerkes in 1915, (c) the Stanford Revision by Terman in 1916, and (d) Burt's Revision in 1921. It is important to mention that Yerkes' scale was the first 'point scale'. Instead of giving scores in terms of mental age, it is given in terms of points in this scale. Among other point-scales of importance, mention may be made of the Herring Revision of the Binet Tests and the United States Army Mental scales, constructed by Yerkes and Otis. They evolved these tests on the basis of earlier tests and examinations.

The application of intelligence tests in the field of army recruitment led to two very important developments, namely evolution of group tests and performance tests. The first was born out of the urgent need for assessment of a large number of people in the shortest possible time, while the latter out of the need to find a workable and dependable tool of assessment for illiterate people and those who could not read English because of foreign origin. The most widely used of the Army scales were the Army Alpha Test brought into use for the first time about the year 1937, and the Army Beta Test. The former test was for literates and the latter for illiterates. It consisted of a variety of pictures and diagrams and the directions were given without the use of language. Soon after the group tests were widely and successfully used in the United States Army, psychologists started constructing group tests for their use in schools and colleges.

As a direct outgrowth of the United States Army Tests, Haggerty Delta I and Delta II and National Intelligence Tests came into use as early as 1919 and 1920. The National Intelligence Tests were worked out by an expert committee consisting of Haggerty, Terman, Thorndike, Whipple and Yerkes and they dominated the field for a long time.

A group of non-language tests not requiring the use of pencil and paper but rather requiring the manipulation of actual objects came to be designated as performance tests and work in the construction of such tests also proceeded simultaneously along with the other non-verbal tests and group tests. The Michigan Non-Verbal series by

Edward Green, the Drawing Test by Goodenough and tests devised by Andrew. W. Brown published in 1936 were followed by the Terman Group test and the Otis Self-administering Test of Mental Ability. The Psychological Examination devised by Thurstone was another widely used test (Murshell, 1950). The VACO test devised by F. N. Freeman also found great appreciation and general acceptance. (Murshell, 1950). In England construction of excellent group tests proceeded along with those in America and the earlier attempts in this direction by W. H. Winch (Ballard, 1949) were followed by those of Cyril Burt (Burt, 1921). Group tests devised by him have been widely used by the Bradford Education Committee, while such tests evolved by Godfrey Thomson, have, in a similar manner been used by Northumberland Education Committee (Ballard, 1949). The prestige of these group tests increased enormously with their introduction by the Civil Service Commissioners. The Education Research Committee of London, the Head-Teachers' Association under the enterprising leadership of T. G. Tibbey and the psychological staff of University College, London, under the guidance of Spearman carried out extensive work in experimenting with the group tests of intelligence and pronounced them to be sound and practicable (Ballard, 1949). With such a strong background of support in favour of group tests, further work was continued in the field of group test construction and its applications.

In India, intelligence tests appear to have been first adopted by Rice (Rice, 1922) who translated the Binet scale into Hindustani. V. V. Kamath in his work on 'Measuring Intelligence of Indian Children' made use of the Binet scale translated in Marathi (Kamath, 1940). Dr. Sohan Lall took up similar work in U.P. (Sohan Lall, 1948). Following these pioneer works, numerous translations and adaptations in Bengalee, Hindustani, Tamil, Telegu, Hindi and Urdu at various Training Colleges and Universities by eminent educationists have been subsequently made.

In detailing the history of intelligence tests, it has been seen how individual intelligence tests were supplemented by group intelligence tests and how the original verbal test technique had to be expanded by new techniques depending on non-verbal tests. In the series of non-verbal tests techniques were developed depending either on the use of paper and pencil, or of objects, or simultaneously on both. The limitations of depending on single tests for the assessment of intelligence were recognised early in the history of their application and the use of a battery of tests comprising a number of individual tests came into general practice.

As may be seen from the above discussion the problem of group

testing was solved to an appreciable extent by the year 1920. But in this process the difficulty of assessing special groups, such as those comprising illiterate people, physically handicapped people, or of people speaking foreign language, soon became apparent. Application of such scales as Stanford-Binet or Terman-Merrill, requiring oral replies in English or written answers in the same language could not be effectively made for above mentioned groups. It was also experienced that educationally retarded children failed to manage individual or group verbal tests. Bilingual individuals also posed a problem even though they had adequate knowledge of another language to communicate with others on ordinary matters or even to attend schools for their education through the medium of this language. They experienced an inherent handicap in taking a verbal test in that language for the existing tests were standardised for the monolingual's vocabulary range, verbal fluency or facility in handling verbal relations. In Tripura, for example, the tribal children have the same disadvantages when they are asked to answer papers in Bengali, even though they have sufficient knowledge of this and they have their schooling through the Bengali-medium. The fact is that the effects of bilingualism are too varied and complex to be overlooked in administering intelligence tests. It began to be realised clearly that such individuals' intelligence could not be adequately assessed with the help of verbal tests inspite of their apparent mastery in the secondary language. All these considerations led to a shift in intelligence test construction in favour of performance tests. Further impetus was derived from the problem of evolving an effective tool for assessment in inter-cultural comparison.

In trying to make an exhaustive psychological study of the 'wild boy' of Averon, Itard in 1801 appears to have come upon the idea of using performance tests for measuring intelligence (Gaw, 1925). He conducted a large number of experiments with infant idiots during the first half of the nineteenth century with various combination of forms and colours. Similar work was also done by Seguin and they both constructed a number of form boards making use of various manipulative devices of graduated difficulty. The usefulness of these tests and their effective utilisation led to further researches in two directions namely, in trying to construct a scale of intelligence based on performance tests, and in devising educative processes for little children—the Montessori method. However, during the nineteenth century, performance tests were mostly limited to those depending on simple sensory-motor skills, reaction time, strength of grip, etc., for the measurement of intelligence.

They were important in showing that researches could be con-

ducted to evolve suitable performance tests for measuring intelligence. In the year 1905, when Binet published his intelligence tests, which were based almost entirely on verbal abilities, they proved so effective and useful in measuring intelligence as it was then conceived that for some time all researches appeared to have been directed along the line of the Binet tests. As a result, work on performance tests appeared to suffer a set back. But as researches on the purely verbal type of intelligence tests progressed, their short-comings began to be felt more and more keenly. This led to the revival of performance tests, along with the feeling of psychologists that a comprehensive picture of mental ability could not be obtained by linguistic tests alone and that it was necessary to rectify the over emphasis on linguistic tests for mental measurement. That is why soon after the construction of various verbal tests, marked efforts were made by different psychologists to bring out dependable performances scales so as to enable assessment of intelligence even without the application of verbal tests. In his pioneer work on delinquents, Healy realised the need of supplementing the more verbal type of tasks predominant in Binet's scale and as a result the 'Healy Fernald Test series' were assembled in 1911. This was, however, a mixture of verbal and performance tests and was soon followed by a series of performance tests developed by Knox for testing foreign speaking immigrants at Ellis Island (Anastasi, 1954). In this series, there was a complete absence of language either in answering the questions or in administering the tests. The series consisted of a set of form-boards of increasing difficulty, a ship test and Knox's cube test. Attempts to measure intelligence by performance tests during their early phase appeared to be rather disappointing as they resulted in contradictory conclusions (Gaw, 1925). Their correlations with generally accepted criteria were found to be insignificant and low in many cases. These low correlations possibly resulted from unrealistic test construction as well as from their comparison with criteria based almost entirely on linguistic ability. This did not, however, lead to abandonment of non-linguistic tests. As a matter of fact psychologists tried to work out more dependable performance tests. The form-board type of tests were followed by picture completion and picture assemblage tests and they in their turn led to various others such as the Porteus Maze test. There were basically two types of tests, those depending on manipulation and re-arrangement of actual objects such as blocks of wood and others in which the major function was concerned with the handling of symbolic representation of the objects, such as picture parts, mazes etc. Efforts were also made by workers in the field of performance tests to evolve suitable scales. The first exhaustive and dependable scale appears to date back to 1917, when Pintner and Paterson published their scale

in the form of a book. This scale consisted of several types of tests originally resulting from the author's attempt to measure the intelligence of deaf children and was standardised for normal children of both the sexes for the ages 3 to 10. In evolving this scale they drew freely on the work of Seguin, Healy, Knox and others. The entire series consist of fifteen tests although for most testing purposes, a battery consisting of the following ten tests has been used : (1) Mare and Foal, (2) Seguin Forin Board, (3) Five-Figure Form Board, (4) Two-Figure Form Board, (5) Dearborn's Form Board (6) Manikin, (7) Feature-Profile, (8) Ship Test, (9) Healy Picture Completion I and (10) Knox's Cube Test. Even though the Pintner-Paterson scale was a very great advance over the earlier attempts to construct a dependable tool of assessment of intelligence based entirely on performance test, it was yet very far from the quality of dependability already attained by such standard test as the Stanford-Binet. The effect of speed of performance on the total scores has been looked upon as a very serious weakness on the effectiveness and dependability of performance scales. It has been a common experience of psychologists that the subject often becomes unduly disturbed by emphasis on speed. Besides, different cultures and sub-cultures have different notions and out-looks regarding speed, and these naturally influence the performance of subjects to whom performance tests demanding an emphasis on speed are administered. A study comparing White, Negro and Indian boys by means of the Pintner-Paterson scale has very clearly brought out the above fact (Anastasi, 1954). The Pintner-Paterson scale was followed in 1920 by the scale evolved by Yoakum and Yerkes for the U.S. army during the war. Soon after, Dearborn's Form Board tests came into the field in 1923.

The survey of the performance tests shows that they can be placed in three divisions ; (a) those like Pintner-Paterson, which are parts of a scale, (b) those like Ferguson's which are parts of a series and lastly (c) those like Woodworth and Wells' which are single tests. An overall assessment of general intelligence requires that different tasks of graduated difficulties must form a part of the assessment tool as otherwise the manifestation of general intelligence cannot be properly gauged. It is on this assumption that Binet developed his scale. Supposing one particular item from the Binet scale, memory for digits, for example, is used as a test of intelligence, it will certainly fail to give any dependable assessment figures. So also in performance scales. The second type of tests in which sub-tests depending on ability, similar in nature but of graduated difficulty, form a series have the handicap of being unable, by themselves, to give dependable assessment of intelligence. The same drawback appears to be present in the third type. It must, however, be men-

tioned that these latter two types proved to be of immense value when used along with other standard intelligence tests.

Of the later development, mention may be made of Form I of the Arthur Performance Scale published in 1930. It was based upon a re-standardisation of eight of the Pintner-Paterson tests together with the Porteus Maze tests and Kohs' Block Design test. In 1947, a revised Form II of the Arthur Performance Scale was brought out. It consisted of 5 tests namely (1) Knox's Cube Test, (2) Seguin's Form Board Tests, (3) Porteus' Maze Test (4) Healy's Picture Completion Test II and (5) one newly developed test by him. The data on reliability and validity reported by Arthur were meagre. The utility of performance tests as effective tools for the measurement of intelligence having been accepted specially in circumstance wherein verbal tests proved ineffective or inoperative, the problem of developing a proper technique in the construction and administration of performance test began to be attended to in greater and greater measure. Efforts naturally began to centre round the construction of dependable batteries of performance tests, which would enable proper appraisal of the mind. Selection of the individual items of the battery began to be carefully made so that the score as a whole could be expected to measure the global capacity of the individual "to act purposefully, to think rationally and to deal effectively with his environment" (Wechaler, 1944, Page 134).

Before concluding the discussion on the work of western psychologists, it is essential to review some of the important work carried out by Thorndike, Gaw, Alexander, Collins, Drevers and a few other eminent psychologists. Thorndike in his discussion on intelligence asserts that three distinct types of intelligence must be recognised (Thorndike, 1940). These he describes as mechanical, abstract and social. The first is manifested in one's ability to understand things and mechanisms, the second in one's ability to understand ideas and symbols while the third in one's ability to act wisely in human relations. Collins and Drevers in their book 'Performance Tests of Intelligence' (Collins and Drevers, 1946) points out significantly that Thorndike's description of the types of intelligence has a fundamental common base namely 'intelligence'. But they, however, feel that Thorndike's 'social intelligence' is more temperamental than intellectual being dependent on factors like feeling, interest, etc. They therefore, suggest that two main types of intelligence, 'concrete' and 'verbal' corresponding to Thorndike's 'mechanical' and 'verbal' respectively, should be adequate. In the same book Collins and Drevers refer to the interesting work of R. A. Learning who gave mental, scholastic and performance tests to six hundred children and found

that the results indicated that the children could be arranged into four groups, namely a group who did well both in intellectual and performance tests, a second group who scored poorly in both, a third in which the boys did poorly in intellectual but well in performance tests and a fourth in which they did well in intellectual but poorly in performance tests. These results appear to confirm Thorndike's views concerning different types of intelligence. Collins and Drevers, in their efforts to review the place of performance tests in assessing mental abilities of children, remark that the best survey of an individual's mental ability can probably be obtained by an intelligence examination composed of verbal and performance tests. They have also considered to what extent performance tests can take the place of verbal tests of intelligence. In this connection they have discussed the views of Terman who feels that verbal tests alone can make a real assessment of mental ability in as much as these tests, being composed of symbols and language, bring into play the ability to think in abstract ideas in its best form. If these views were to be accepted, performance tests would certainly be useless for testing the higher levels of intelligence. But Collins and Drevers make a very important point, namely, that psychologists and educationists have not been able to come to any agreement about a common definition of intelligence. They point out that instead these psychologists and educationists have their own ways of looking at it. They conclude their discussion by claiming that performance tests can assess a type of intelligence which plays a distinctively important role in the practical work of the world. In this connection Francis Gaw's comments on performance tests are worth mentioning. According to her, "Performance tests are essentially measurements of intelligence, measurements in which the manual response is but a means to an end, analogous to the written response required in numerous linguistic tests" (Gaw, 1925 Page 3). Collins and Drevers even go to the extent of suggesting that the performance tests have a definite advantage over the verbal tests as the former are less affected by the element of schooling and as such are probably more dependable in giving an idea of the native intelligence of the groups tested. (Collins and Drevers, 1946).

In the year 1935, A. P. Alexander published a paper entitled "Intelligence Concrete and Abstract" (British Journal of Psychology, Monograph supplement No. XIX). The main object of this paper was to resolve the long standing controversy regarding the nature of intelligence, arising from the practical and verbal aspects of intelligence tests. The unique traits theory advocated by various psychologists contended that verbal intelligence and practical intelligence were two independent traits while Spearman's 'two-factor theory' advanced the view that all cognitive abilities whether practical or ver-

bal were based on a general factor 'g' common to all these abilities and specific factors 's' peculiar to particular abilities. The researches of Spearman stimulated further work on the 'Group Factor' theory. The sampling theory of Thomson (1939) and Primary Mental Abilities postulated by Thurstone (1938) appeared to be among the more important outcomes of such work. The existence of a 'verbal factor' was more or less accepted but that of a 'practical factor' or 'mechanical factor' appeared to be still in question. A. P. Alexander took up his work on this question. He defines 'practical intelligence' as the ability measured by performance tests of intelligence and 'verbal intelligence' as that measured by verbal tests of intelligence. By a detailed analysis of such tests through the statistical method of 'multiplefactor analysis' he confirms Spearman's view that a general factor 'g' runs through all cognitive abilities—practical or abstract. He further concludes that in addition to this 'g' factor, other group factors form clusters of verbal tests and performance tests separately, and these he calls 'v' and 'f' factors respectively. Thus, according to him, a person's intelligence may manifest itself in proportion to his possession of 'g', 'v' and 'f'. It may be that he has 'g' and a preponderance of 'f' making him more a practical type of man, or it may be that he has 'g' and a preponderance of 'v' making him more academic type. Alexander, however, points put that this should not be construed as saying that a person who scores highly in performance tests will score very low in verbal tests or vice versa. A man may be good in both the spheres or bad in both the spheres or good in one and bad in another. These findings are in line with those of R. E. Learning, reported in Collins and Drevers' 'Performance tests of intelligence' (Collins and Drevers, 1946) mention of which has already been made previously.

It must have been noted that efforts aimed at concretising the concept of intelligence and consequent upon that the efforts to evolve appropriate intelligence tests have benefited from the application of statistical methods in the test scores. The greatest contribution in clarifying the position appears to have resulted from the correlational technique culminating in the adoption of 'factor analysis' as an effective tool in explaining facts of psychology. The credit for such an application may well go to Spearman, who developed his theories of 'g' factor, 's' factor and 'group' factors in his brilliant researches as early as 1927. His researches were followed by the outstanding works of W. P. Alexander (Alexander, 1935), L. L. Thurstone (Thurstone, 1938), and G. H. Thomson (Thomson, 1939). The place of factor analysis in psychological investigation has now been well established, and the techniques has been coming into greater and greater prominence in modern psychological research work. A word

of caution needs, however, to be given here. Factors as arrived at, by the application of factor analysis, are mathematical formulations and not psychological concepts. They are means to an end and not end in themselves. Factorial concepts must, therefore, be looked upon as principles of classifications and not as entities identical with psychological concepts. They may, however, provide insight into psychological processes and suggest more direct methods for their measurement.

In view of the general acceptance in the psychological world of Alexander's contribution regarding 'gv' and 'gf', efforts have been made to construct intelligence tests which might be capable of giving a global view of intelligence. The Weschler-Bellevue Intelligence Scale may be mentioned in this context. But the fact that in certain peculiar circumstances verbal tests, in spite of their importance, cannot be administered has led to fresh thinking directed towards evolving intelligence tests, which though performance type in nature, are capable of assessing the same factors as the verbal tests do. The technique of factor analysis is used to determine whether the tests thus constructed have the same structure as those of parallel verbal tests. Work in this direction are now in progress under Dr. (Mrs.) Rhea S. Das, Associate Professor of Psychometry in the Indian Statistical Institute, Calcutta.

In India the peculiar circumstances resulting from the co-existence of scores of cultures and sub-cultures and perhaps a much greater number of dialects and languages have, in recent years, induced workers in the field to work out standardised batteries of performance test in preference to verbal ones. Account has to be taken of the other very important factor leading to such a situation namely, the appalling mass of illiteracy prevailing in India. Reference, in this connection, to the work of Dr. C. M. Bhatia in constructing and standardising a battery of performance tests of intelligence under Indian conditions demands special mention (Bhatia, 1955). Mention must also be made in this connection about very good and substantial work, in this field, by the Anthropological Department, Government of India. Shri P. C. Ray has done very useful work in trying to assess intelligence of aborigines in different parts of India and has published a number of articles from his department (Ray, 1951, '53, '55 and '56). Thomas C. Vicary made an investigation of intelligence through non-verbal tests in India studying aboriginal subjects (Vicary, 1938). He carried on his work with the Goddard Form Board Test, Porteus Maze-Test and Cube Imitation Test.

BIBLIOGRAPHY

Alexander, W. P., 1935.
Intelligence, Concrete and Abstract.
British Journal of Psychology,
Monograph Supplement, Vol. 6, No. 19.

Anastasi, A., 1954.
Psychological Testing.
The Macmillan Company, New York.

Ballard, P. B., 1949
Group tests of intelligence.
University of London Press Ltd., London.

Ballard P. B., 1920 (Ed.), 1955 (Ed.),
Mental Tests,
University of London Press, London.

Bhattia, C. M., 1955.
Performance Tests of Intelligence Under Indian Conditions.
Oxford University Press.

Binet, A., 1905.
“Le development de l’ intelligence chez les enfants”
L’ Année Psychologique 14.

Burt, C., 1921.
Group Test of Intelligence.
London, England.

Burt Cyril, 1955.
“Evidence for the Concept of Intelligence”.
British Journal of Educational Psychology, Vol. 25, 158-161.

Collins, M. and Drever, J. 1946. (3rd Edition).
Performance Tests of Intelligence.
Edinburgh : Oliver and Boyd.

Galton, F. 1869.
“Psychometric Experiments”.
Brain, 2.

Gaw, Frances 1925.
“A study of performance tests”.
British Journal of Psychology General Section, Vol. 15, 374-392.

Kamat, V. V., 1940.

Measuring Intelligence of Indian Children.

Bombay : Oxford University Press.

* Katha-Upanishad 3 : 3, 4.

Indian Philosophy, India.

Lavator, 1772.

Essays on Physiognomy.

Pearson, K., 1914.

The life, letters and labours of Francis Galton. Vol. II.

Cambridge University Press.

Pearson, K., 1906.

Correlational methods.

Cambridge University Press.

Ray, P. C., 1951.

"Differences in concrete intelligence among the Jounaries".

The Journal of the Asiatic Society, Science Vol. 17., No. 1.

Ray, P. C., 1953.

"Application of Performance Tests on the Bhills of Central India."

Bulletin of Department of Anthropology, Vol. I No. 1.

Ray, P. C., 1955.

"Tensional Feelings among the Abors and Gallongs as Indicated by the Research Technique".

Indian Journal of Psychology. Vol. 30, 95-103.

Ray, P. C., 1956.

"Effects of acculturation on the personality structure of the Baiga".

Read before the Indian Science Congress held at Calcutta in the year 1957.

Rice, C. H., 1922.

A Hindustani Binet Performance Point Scale.

London : Oxford University Press.

Sohan Lall, 1948.

Mental Measurement.

Kitabistan, Allahabad, India.

Thorndike, E. L., 1940,

Human Nature and the Social order.

The Macmillan Company, New York.

Thomson, G. H., 1939,
The Factorial Analysis of Human Ability.
Heughton Mifflin Company,
Boston, Mass.

Thurstone, L. L., 1938,
Primary Mental Abilities.
Psychometric Monograph 1.
University of Chicago Press, Chicago No. 1.

Vicary Thomas C., 1938.
An Investigation into the Use of Non-verbal Tests of Intelligence in India.
University of London.

Wechsler, D., 1944.
The Measurement of Adult Intelligence.
Williams and Wilkins., Baltimore.

A Novel Method of Teaching

—S. C. Dubey

Sleep-teaching is the latest development in the field of applied Psychology. I use the term 'teaching' in its two broadest sense. (i) to impart knowledge, and (ii) to socialize the child. Sleep-teaching makes it possible to sleep on a subject—quite literally, you want to learn, and learn it faster and more thoroughly than by the most determined application of the conscious mind. But it is something more than to 'sleep on' a problem you have been unable to solve by your conscious efforts, and to awaken with the answer. The latter is incidental in its approach while the former is quite a formal technique. Sleep-teaching makes it possible to break bad habits of pupils ranging from over-eating, thumb-sucking, bed-wetting, nail-biting to speech defects. It helps to socialize the child by acquiring a particular behaviour-pattern best suited to the culture of the society, he or she is a member of.

The principle of sleep-teaching was known to the ancients. In Greece as well as in Egypt people brought their problems to the temple priests, who whispered helpful suggestions into their ears while they were asleep, in matters of health, wealth, love and encouragement.¹

Samuel Taylor Coleridge reports the case of a twentyfive year old woman who could not read or write, and who could speak only English. Once during an illness, which was then known as brain fever, she began to speak Latin, Greek, and Hebrew all of a sudden in very pompous tones. What was the secret of it? She had been a servant to a Protestant pastor for many years. The pastor read aloud to himself the scriptures in the above languages as he walked up and down a hall-way adjoining the kitchen where the young woman cooked. And her subconscious had absorbed the passages,

¹ Athenaeus, The book of Deipnosophistae, XIII page 605.

though she was not conscious of it. The words that she uttered during her delirium coincided with passages in books of the pastor.

Dr. Wilder Perfield of Montreal Neurological Institute, once during surgery under local anaesthesia, stimulated by electric current, certain brain cells of a patient who was conscious, and he reported perfect playback of conversation, songs and other experiences as far back as childhood, stored in the cells.

The modern world of science and technology has offered us a very ingenious device for sleep-teaching.

In the early years of the fourth decade of this century, Max Sherover of U.S.A. one of the pioneers in the field of sleep-teaching, produced the first mechanical device for sleep-teaching with the help of a Sanfrancisco Engineer, Elmer Brown. It consisted of a combination of a record-player with the arrangement of repeating the records automatically, an electric clock for automatic switching on and off the record-player and an under-the-pillow speaker which whispered the record instructions in a very low tone into the ears of the learner, while he was asleep.

Research studies² show that sleep-teaching device of Sherover was originally tested by Charles R. Elliot of the University of North Carolina. He tried to teach 15 unrelated words of three letters each to his sleeping subjects. The next day this group, and a control-group who had not been sleep-taught these words, were asked to memorize the list of words. The first group learned the list 83 per cent faster than the control-group. Several other experiments were made, and Elliot came to the conclusion that 'sleep-teaching' was similar to re-teaching something the person has temporarily forgotten.

Next year Sherover reported that sleep-teaching was very successful and his students were learning languages 25 per cent to 30 per cent faster than others who normally learn while awake.

In 1949 Ramon Vinay³, a Chilean opera-star surprised the world by memorizing a leading operatic role in accentless Italian very quickly, by sleep-learning technique, and Sherover's device became celebrated in musical circles.

² Turnbow, A. W. *Sleep Learning, Its Theory, Application and Technique*, Olympia, Wash., Sleep Learning Research Association, 1958.

³ David Curtis, *Learn While you sleep*, Libra Publishers New York, 1960 page 19.

Art Linkletter⁴, a well-known radio and television-star sleep-studied the world's most difficult language—Mandarine Chinese for ten nights only and was able to converse with anyone who speaks the elegant Mandarine dialect.

It is a well-known fact that during the World War II, members of the armed forces of USA were taught the Morse Code and foreign languages with sleep-teaching devices, in a necessarily brief period of time. A group of Corporations in America started sleep-learning self-confidence-development courses to bolster the effectiveness of their salesmen.⁵ In 1951, Soviet Union passed a law making it compulsory for doctors to pump powerful suggestions into the sub-conscious of every mother-to-be, by the same method, to make the delivery painless. To-day considerable interest is evinced in the medical circles about the pain-reducing and pain-eliminating faculties of sleep-suggestion.⁶

The memory training qualities of sleep-teaching techniques has been acknowledged far and wide, and it is of particular interest to those who must remember specialized data. Mr. David Curtis reports⁷ that memorization rate of a mid-western lecturer has increased by 75 per cent by this method. It is reported that a railroad despatcher in America memorized the entire passenger-train schedule of the Union Pacific Railways in ten days ; a postal employee memorized the postal zones of 16,000 streets ; a television announcer memorized commercials very thoroughly and quickly, and remembered them at will when on the air ; a production executive in a large advertising firm has memorized 600 telephone numbers of frequent usage within a very short time by sleep-learning technique. These are only examples selected at random to illustrate the validity of sleep-teaching technique in memory training.

SOCIALIZING A CHILD BY SLEEP-TEACHING: Sleep-teaching helps children in two ways to make them social beings. Firstly, it helps to remove their personal oddities which prove a barrier or hindrance in their social mix-up. The Institute of Logopedics, in Wichita, Kansas conducted experiments to find out whether sleep-teaching could cure speech defects. The results of their study showed that students who heard a list of words while sleeping, memorized them and learnt to pronounce them more accurately and much faster than the control-group which was not provided the benefit of sleep-teaching.

⁴ Ibid, page 19.

⁵ The Wall Street Journal of America, March 14, 1958.

⁶ David Curtis, op. cit., page 18.

⁷ Op. cit., page 21-25.

Psychologists have also reported success in breaking bad habits of children by this device. Over-eating, thumb-sucking nail-biting, bed-wetting, making grimaces—all these social evils are cured by this method very effectively. Psycho-therapists submit favourable reports on the success of implanting therapeutic suggestion in the subconscious mind to supplement treatment during working hours⁸.

The Sleep-learning Research Association reports some experiences of a Florida doctor in which sleep-teaching therapy resulted in a cure ; a man had lost his voice at the age of four due to psychological causes. For twenty-six years he could barely whisper ; after sleep-therapy he recovered full use of his voice.⁹

SECOND ADVANTAGE

Now let us study the second advantage of sleep-teaching technique to make children ideal citizens of the State. There are two conflicting views regarding the purposes of education for citizenship. One is a liberating view. It removes barrier to knowledge. It permits without bias, the examination of all conflicting political programmes. It encourages critical thinking and independent judgement. The other is a restrictive view. It seeks to impose censorship and to stifle free discussion. It discourages critical thinking by trying to direct the pupils' thought towards preconceived conclusions. Both views have influenced school programmes, one in democratic countries, and the other in the countries under dictators.

At present the University of North Carolina, the University of California, William and Mary Parsons Training School, U.C.L.A., and George Washington University, besides the Institute of Logopedics mentioned above, are busy in America, to study the various phases of sleep-teaching, and their findings have led to world-wide recognition of this novel technique of teaching.

THE PSYCHOLOGY OF SLEEP-TEACHING

1. The Psychological basis of sleep-teaching is the working of the subconscious. A machine called electro-encephalograph which records brain waves has shown that our subconscious is receptive and alert all the twenty-four hours, and it has established that our subconscious mind can absorb impressions for that full period. Every one can verify from his personal experience this dynamic

⁸ Dollard, John and Miller, Neal E., *Personality and Psycho-therapy* New York Mc Graw-Hill, 1950, page 101-12

⁹ Turnbow, op. cit., page 135.

characteristic of the sub-conscious. While going to sleep you ask your subconscious to wake you up, say at 5 A.M. and there are 90 per cent chances that you will wake up at the right time without the aid of an alarm-clock.

Recently the Reticular Theory¹⁰ of Consciousness has been advanced to explain the working of the brain. According to this theory, it is the mid-brain or the subconscious which performs the function of integration of impressions at the highest level ; it is the subconscious which stores the patterns of the learned behaviour for future reference ; and it is the subconscious or the reticular system which sends out impulses to the cortex to induce a muscular response.

2. During the sleep mental stress is at minimum. All the factors conducive to efficient learning, are present during sleep, and the doors of subconscious mind are always open.

3. Sleep-teaching process utilizes the suggestibility of the students at the maximum. Reasoning function, the greatest hindrance to suggestibility is almost nil during sleep.

4. Dr. Wilder Penfield of the Montreal Neurological Institute has established by his experiments that the 'natural tape-recorders in our head require only one impression for retention, possibly life-long retention. Sleep-teaching directly records the impressions on the brain cells, where they are retained life-long.

5. Validity of Sleep-teaching by Freudian Psychology.

Literature concerning psycho-analysis does not recognize the term subconscious ; it uses the term 'unconscious'. But practically there is no difference between the two. The subconscious of sleep-teaching and hypnosis is in fact the unconscious of the psycho-analysis.

Freud said, "unconscious is a regular and inevitable phase in the process constituting our mental activity, every material act begins as an unconscious one, and it may remain so or go on developing into consciousness, according to whether it meets resistance or not." Freud believed that everything conscious has a preliminary unconscious stage, but the reverse is not true. Thus according to Freud, every idea begins in the unconscious and hence sleep-teaching pedagogues are right in pumping ideas directly into the unconscious.

Freud also said that ideas which are not completed during the

¹⁰ C. Daly King, The Psychology of consciousness, page 51.

working hours owing to some accidental cause pass on to the unconscious to be completed there during sleep or rest. And hence sleep-teaching may be complementary to day-teaching.

6. *Validity of Sleep-teaching by the Psychology of Jung.*

According to Jung, the ideas pumped into the subconscious layer of the mind during the sleep, must be integrated by the conscious mind, by virtue of the natural function of the mind, and hence sleep-teaching will be complementary to teaching during the waking state.

7. Dollard and Millar, students of Hull say that reinforcement of all kinds strengthen responses, which immediately precede them: Primary effect of reinforcement is unconscious. Unconscious reinforcement is mediated by verbal responses and other cue-producing responses.

8. Dr. Bernard Hollander says that subconscious thinking constitutes much of our thinking, and we are conscious only of its result. Hence the ideas directly poured into the subconscious during sleep-teaching must help our thinking.

9. Robert D. Updergraff¹¹ believes that subconscious can be put to use consciously and deliberately. Sleep-teaching device does the same, of course, in a more formal and deliberate manner.

Subconscious is the store-house of memory and habits. We can fill it during sleep with purposive suggestions. It will retain these suggestions better than conscious ideas which knock at the door of reasoning and because suggestions are given during the sleep, when there are no barriers and the mind is calm and peaceful, it helps setting the ideas in the mind.

10. All the accepted theories¹² of learning stress, (i) motivation, (ii) reward, (iii) association, and (iv) repetition as the primary factors helpful to learning. Sleep-learning utilizes these basic concepts to a much more valuable degree than heretofore made use of by the traditional method of teaching.

PROCEDURE FOR SLEEP-TEACHING

1. *Motivation:* The students should be motivated to learn during the sleep. He should understand that sleep-learning is com-

¹¹ Reader's Digest, March 1960.

¹² Thorpe, Louis P., Schmuller, and Allen M., *Contemporary Theories of Learning*, New York, The Ronald Press,

plementary to his learning during wakefulness ; it is much more effective and efficient.

2. *Reward* : A feeling of reward helps motivation. If a student genuinely feels the effectiveness of the method, he will be better prepared for sleep-teaching.

3. *Association* : Sleep-teaching is complementary to teaching during waking hours. Definite association made during the waking state, will help the recall of the sleep-learned-matter more correctly and smoothly.

4. *Sleep-teaching Technique ; Repetition* : After motivation, reward and association, the sleep-learner begins listening to the recordings before falling asleep. The first thing that he hears is 'relaxation affirmations' which are designed to help prepare the subconscious of the sleep-learner for the proper degree of receptivity after falling asleep. This pre-sleep relaxation is very important during the first week of sleep-study sessions, because he has to overcome the tension and nervousness attendant on a novel and exciting experience. It is found that many beginners awake at the sound of recorded voice, sometimes a moment ahead of time. But this problem is usually overcome in a few nights, and in some cases, does not arise at all, when the learner is well-motivated and well-disposed to sleep-learning. But if the learner's mind create 'barriers', it can be eliminated by gradual conditioning of the subconscious to audible directed sound. Once it is accomplished, the barrier does not re-appear and the material can be easily learnt in a few nights, even in a few hours. Experiments have shown that it takes 15 to 30 nights to condition students to complete nocturnal-reception in those cases which show the greatest 'barriers'. If the resistance is very great, it may be overcome by using a tape, with a positive affirmation for sleep-learning and the repeated hearing of the tape generally remove the psychological block. Other recommendations for getting through the barriers are the followings :

- i. Consciousness and genuine desire to succeed.
- ii. Not even a night's interruption in sleep-study.
- iii. Short lessons at the beginning.
- iv. Lessons given in the beginning should be musical, alliteration adds to the rhythm, and rhythm is conducive to early reception, and removal of barriers.

- v. Avoidance of alcohol and drugs which induce unnatural heavy sleep.
- vi. Building up self-confidence by removing tensions and negative thoughts.
- vii. Even if the barrier appears impenetrable, special sleep-therapy tapes are available to remove that.

The Best Time of Sleep-study : In the beginning only 'Reverie Period' should be used for sleep-learning. The light sleep period, just after falling asleep, and one hour just before rising, is called the 'Reverie Period'. Psychologists have found that during this period subconscious is most receptive.

When the reception has been definitely established, the transitional sleep-period should be utilized for sleep-learning. This period begins usually three hours and forty minutes after falling asleep. Psychologists have found that the material received by the subconscious during this transitional period is remembered most rapidly of all.

It is certain that during sleep-learning number of impressions or repetitions necessary to memorize any material is a great deal less than the repetitions need while awake, but, no doubt, repetition is necessary in sleep-study, as in traditional method of learning.

Retention and Recall of sleep-taught material : The following factors have been found helpful to this end :

1. Motivation, i.e., the thinking of the reward that will be yours as a result of learning.
2. Material, that is understood, is retained better than material learned by rote only.
3. Repetition helps memorization, but not to retain a material for any length of time, the use of intelligence, and its integration into the total personality is necessary.
4. Writing the material after sleep-learning, makes the learning permanent.
5. Repetition, a few times after the material is learned, aids in retention, and refresh memory, repetition of identical material, is helpful.
6. Too much material should not be studied during one night.

7. In learning a foreign language, the words of the mother-tongue, or any other language the learner knows better, should be placed ahead of the foreign word to be learnt.
8. Interesting material is easier to retain than dull, static or uninteresting data.
- . 9. When the student is confronted with the necessity of recognition, recall becomes easier.
10. Two unrelated subjects should not be learnt in one night, if it is done so, the second subject can diminish or cancel out the first, and this is called in technical terms, 'retroactive inhibition'.

Some Problems Of Tribal Education

— *S. R. Jayaswal*

Education in tribal India presents a variety of problems. These problems are related to the general problems of the tribal population of our country. It is our duty to study these problems, not only politically but also socially and culturally. Before independence, the tribals were exploited for political and religious purposes. No serious effort was made to study the problems of the tribal India with a view to integrating their way of life with the general matrix of Indian culture. Since independence however, a fresh thinking has been made. But I am aware that there are still such individuals as think that there is no need to bother with the problems of tribal education. I shall not disturb them and leave them as they are. But I would like to address myself to those educationists who are concerned with problems of Indian education vis-a-vis Indian culture, development of personality and defence of democracy which is threatened by the yellow danger from the north.

The problem of tribal languages in general education has many facets. For example, the economic aspect of tribal education is related to the concept of collective ownership found among tribesmen of certain areas. They are unaware of the concept of individual ownership. The law of the land does not recognise the right of a village-community over certain areas of land for agricultural or other purposes. In view of this, there is bound to be a conflict between the so-called civilising mission of the State and the fundamental right of the tribesmen to own land collectively. How to bring a change in the concept of ownership as found among tribesmen ? One method is that of force, and another is by persuasion and education. We are pledged to pursue peaceful methods, because in a democracy, method of force is ruled out. Thus the economic aspect of tribal problem must be kept in view while planning for tribal languages in general education.

And then there are social and cultural problems. Do we want the tribals to develop socially and culturally to the extent that

they become one with the rest of the Indian population, or keep them as specimen of primitive peoples and permit them to follow their way of life as they have been doing for the last several centuries ? It is a matter of utmost importance, for on it rests the educational aims and objectives, methods and curricula of tribal education.

There are two alternatives in regard to objectives of tribal education. One alternative is to bring such changes in the value-system of the tribals as enable them to become one with the rest of the country. This has been done in New Zealand in case of Maori tribe. The other alternative is to leave the tribesmen as they are, and allow them to follow their own style of living. This seems justified in view of the fact that in a democratic set up nothing is done against the will of the people. The tribal population of India should be given freedom to live as they wish to live. But I feel this does not meet the ends of justice. I have a third alternative, which is to provide the tribesmen with opportunities of social and cultural advancement and it is upto them to avail of these opportunities. In other words, we cannot force the tribals to give up their way of life and adopt the modern method of living. Moreover, we have to bear in mind that modern Indian culture has its weaknesses too. The tribesmen have developed certain social mechanisms during the past several centuries which make their lives happy and contended. If we force them to give up their social values and adopt the modern way of life, we shall be doing a great harm to them. We shall place tribesmen in a distressing situation. It is, therefore, desirable to plan a programme of education for tribesmen keeping in view the necessity to preserve what is good and desirable in their culture and teach them only those attitudes and values which are in harmony with the general pattern of culture in India. It is needless to point out, that modern India can learn many useful things from the tribals. Hence, it is desirable to bear in mind that tribesmen are not so backward as as some may think.

In the past few decades tribal education has remained neglected. The civilising missions of Christians and some other religious sects used education for their own parochial ends. No serious effort has been made to spread education among the tribal people through their language and culture. It is a well-known principle of teaching that the child should receive education in his mother-tongue. But the tribal child is denied this facility in a formal setting. The State Governments try to spread language of their regions among the tribal people. For example ; in Assam, according to a publication * of the Government of India, almost every where the medium of instruction

* The Adivasis, 1955.

is Assamese. The reason given by the authorities is that teachers having knowledge of tribal languages are not available. Same is the situation in Orissa and Madhya Pradesh. We hope that the situation must have improved by now, as this was reported in 1955.

Coming to the specific problem of medium of teaching the tribal children and adolescents, it has been suggested that use of audio-visual aids must be made on a large scale. The tribal language spoken at home of the child should be the medium of instruction in primary classes. At the secondary stage, the regional language and the Union language may be introduced. It is to be realised that the tribal languages don't have a script, and no seriously written literature exists. In view of this, efforts should be made to evolve a common script for all the languages of the Republic of India. The late President of India, Dr. Rajendra Prasad had suggested that we should have a common script for all languages of the country. It will help not only in strengthening the unity of India, but also facilitate the educational advancement of tribesmen. While evolving a common script we have to provide for a few new phonemes peculiar to various tribal languages. Deva-Nagri script is best suited to meet the needs of a common script for the languages of India.

To sum up, at the primary stage, medium of teaching should be tribal languages and use of audio-visual aids should be made generously. At the secondary stage, regional and Union languages should be taught and the medium of teaching may be either regional or Union language. There should be one common script for all the languages of India. This will be helpful in bringing together all peoples together educationally and culturally. In this way, tribal languages will be able to develop their written literature and the tribal peoples can participate in the general economic, social and cultural advancement of India with their own will. When tribal languages and their literatures have developed sufficiently they could be included in general education and may be offered as optionals by those students who wish to specialize in tribal education and culture. I would conclude with the remark that tribal languages have important part to play in general education provided they are enabled to attain the desirable level of maturity.

EDITORS' OBSERVATIONS

The two alternatives in regard to the objectives of tribal education to which the author has made reference are, we believe, not much of practical concern to the policy-makers of the country. For, as Dr. Elwin has pointed out, the old controversy about the zoos and

museums has long been dead. The choice before the country to-day is not between 'isolation' and 'assimilation'. One would certainly find it difficult to disagree with the author when he says that "if we force them (tribals) to give their social values and adopt the modern way of life, we shall be doing a great harm to them". Obviously the author's objection lies not in the tribals adopting the modern way of life but in the application of force to bring about a change in the system of values. The question, therefore, really is *How* rather than *Why*.

As for the methods to be applied to bring about the changes, the author has recommended that a programme of education should be planned "keeping in view the necessity to preserve what is good and desirable in their culture and teach them only those attitudes and values which are in harmony with the general pattern of culture in India"? What, precisely, should be the nature of this programme in terms of actual methods and curricula to be followed in schools? What, in concrete terms, is there in tribal culture which is 'good and desirable' and worthy of being 'preserved'? What concretely are the 'attitudes and values' which are 'in harmony with the general pattern of culture in India' and in which, according to the author, the tribals are to be 'taught'? What are the 'social mechanisms' which the tribesman have developed during the past several centuries which make their lives 'happy and centended'? The author's ilucidation on these aspects, in a later article will be very highly appreciated.

The author's description of the 'right of the tribesmen to own land collectively' as 'fundamental' to their system of values requires to be examined critically. Private ownership of land is not altogether absent among the tribals. Broadly speaking, the system of ownership is determined by the mode of cultivation. Thus, in the words of Dr. Elwin, "tribes which practise jhuming and those which have taken to regular cultivation will naturally have different systems of ownership". In as much as the tribals have taken to regular cultivation, the institution of private property in land has come to flourish. Similarly, the author's contention that "there is bound to be a conflict between the so-called civilising mission of the State and the fundamental right of the tribesmen to own land collectively" does not also appear to be quite justifiable. In fact, in India after independence the State has not committed to a policy of 'civilising' the tribals. *The Jhum Land Regulations* as are in force in NEFA have actually given recognition to what the author has described as "the right of a village community over certain areas of land for agricultural or other purposes" by providing that the tribal population will enjoy absolute rights over their jhum land i.e "all lands which any

member or members of a village or community have a customary right to cultivate by means of shifting cultivation or to utilise by clearing jungle or grazing livestock, provided that such village or community is in a permanent location". (An important point to be noted here is that even among the tribals who practise shifting cultivation, the concept of community ownership is fast disappearing. This has especially been the case in Tripura). Even if the author's views about the system of collective ownership as constituting a fundamental right of the tribesmen is accepted, a reader will still be wondering what 'the economic aspect of tribal education' may really mean or how exactly the 'economic aspect of tribal problem' can have any bearing upon the 'planning for tribal language in general education'.

The author's recommendation is that the tribal language spoken at home of the child should be the medium of instruction in primary classes. Ideally speaking, the suggestion is commendable. But adoption of tribal languages (in most cases dialects) as medium of instruction presents quite a good number of problems. Out of India's total population of over forty crores, about four crores are tribals spread mostly in isolated groups all over the country. There are areas like Tripura where the tribal population is mixed up with the non-tribals. In such areas composition of the classes in schools is mostly mixed rather than homogenous with the tribal boys and girls taking lessons side by side with the non-tribal students. What should be the medium of instruction in such cases—the language of the region or the dialects spoken in tribal homes? In this regard decisions of the Central Advisory Board for tribal welfare are as follows:

"It was agreed that in the earliest years education should be in the mother-tongue, but mother-tongue in this context can only mean a well-developed language and not dialects. Exaggerated importance to dialects can only increase the fissiparous tendencies in the country which it is the duty of every right thinking citizen to oppose in the interest of national integration. In order that a child speaking any dialect has maximum opportunities in life, it is necessary that he should learn the regional language or Hindi and or English from as early a stage as is feasible" (Extracts from the summary record of decisions at the Seventh meeting of the Central Advisory Board for Tribal Welfare held on 23-4-61 at Vijyan Bhavan, New Delhi).

Even in NEFA where there are as many as fifty languages spoken by the tribesmen, the use of tribal languages as medium of instruction has presented no ordinary problem. While there is good justification for making it obligatory on the part of the teachers to learn

the language of the tribes among whom they may have to work, the most important question facing the educational administrators in tribal areas is not whether tribal language should or should not be given a place in general education but how to adjust education to the various aspects of tribal life. The use of tribal language as medium of instruction constitutes only one aspect of this problem of adjustment. Matters like selection of right type of teachers, training and preparation of text books etc. are of greater practical significance which must be dealt with realistically as well as with imagination. Moreover, in formulating educational policies for tribal areas we have to take care to ensure that as result of the spread of education no violent disturbance is caused to what Dr. Elwin has described as the 'ecological balance of society'. One almost inevitable result that follows from the spread of education is that tribal boys and girls who receive 'schooling' show a tendency to break away from life's traditional moorings. The danger inherent in it is that many boys, to quote Dr. Elwin again, "leave their schools after a year or two and return home as misfits in their villages". The consequences that follow are anybody's guess. It is, therefore, high time that expert erudition of scholars like the author is turned on this and such other practical aspects of tribal education—the more the better.

In-Service Training Of Teachers

—S. K. Sengupta

Education is a process. It is through it that we can build up our nation. The teacher plays the most important part in its whole process. Here the teacher's sincerity and earnestness count much. It is no doubt, unrealistic to assume that we have a programme for educational expansion without taking into consideration the requirement, type and quality of teachers. Our past experience reveals that education cannot lead to any good results, unless it be entrusted to safe hands. By safe hands I mean earnest and sincere teachers having a genuine love for the profession of teaching. To check a child with terror is no education ; to guide him aright is its aim. The teacher is thus the pivot in the entire educational system. Teachers of this category can easily help the successful implementation of the scheme of re-orientation of modern education under the changed political condition of the country.

It is not always correct to say that a teacher is really qualified to teach, simply because he has obtained a University Degree, or a training Diploma, or both. The essential qualification of a teacher is that he must have a sunny zeal for teaching the subject or subjects he has learnt, and a genuine love for children he teaches. The profession of teaching cannot be treated as a stop-gap arrangement, nor can it be regarded as a spring-board to jump at some other better job elsewhere. The entire plan for educational expansion will go waste, unless we can create an atmosphere where the teachers will come forward to accept the profession of teaching with a missionary zeal, and not mearly with the intention of earning their bread.

Children have infinite potentialities. They need proper guidance and necessary training for the unfoldment of their inner self. A teacher must be a sincere and willing worker. If he be really so he may continue to improve himself even when he is in service, provided he does never pose himself to be what he is really not. Tagore's philosophy of education is known to all in the line. Very

emphatically he declared "A teacher can never truly teach, unless he is still learning. A lamp can never light another lamp, unless it continues to burn its own flame". So a teacher must have a living traffic with his knowledge if he is really intent upon preparing himself for the task of imparting education to children.

There may be unitary or joint effect in this direction. A teacher first remembers that he is a national worker; and the national advancement is his goal. Individual improvement is possible of achievement, if a teacher be in right earnest. None can expect anything worth having from an unwilling worker. A genuine love for children naturally tutors a teacher to the niceties of the art of teaching within a very short time. A sincere teacher can easily improve himself in the following ways :

(a) Expansion of General Knowledge, (b) Expansion of the knowledge of the subject-matter, (c) To form habit of reading and writing, (d) To regard school as a miniature society, (e) To attend seminars and undergo workshop training at suitable intervals, (f) To acquire practical and direct experiences through travelling, (g) To regard the noble task of teaching as a pleasant traffic with the mighty minds of the world.

These are some of the ways of individual improvement. A teacher must keep pace with the onward march of time in the realm of thought. Otherwise, I am afraid, he will prove himself to be a miserable misfit in the profession of teaching.

Collective improvement of teachers is also possible, provided they have the spirit of team-work on a common platform. The accommodating spirit is its prerequisite. It fosters team-work. It can be achieved to their great mutual benefit in the following ways :

- (i) Formation of Teachers' Council within the school for discussion of problems of discipline, methods of teaching, modern trends of education, and other aspects of the task in its monthly sittings.
- (ii) Formation of the Committees of subject-teachers within the school for chalking out plans in their sittings before each of the three terms of an academic session.
- (iii) Organization of workshops of teachers for exchange of frank and free ideas amongst themselves to their great mutual advantage.

The workshop method is first introduced in the United States of America. It is a purely democratic organization of teachers where they can express their individual opinions. In the workshop the teachers can also discuss other issues having a bearing upon education.

- (iv) Organization of Demonstration Centres (subjectwise) on zonal basis.
- (v) Publication of school magazines, educational journals, bulletins etc., from time to time.

I am sure that the teachers may easily improve their attainments and quality while in service even without joining any traditional teacher training centre. A sense of self-imposed responsibility provides ample scope for self-improvement not otherwise possible of achievement. Progress of work and pleasure of achievement go here hand in hand. But ultimate responsibility lies with the teachers themselves. Sincerity counts much in every sphere of human activities, and success is sure and certain. It is simply a question of time.

Now-a-days, there is a general clamour that the standard of education is gradually deteriorating. Factors responsible for this downward trend are more than one. Division of attention on the part of students, negligence on the part of guardians, adulteration of food-stuffs, and malnutrition are some of the causes. The creation of a favourable atmosphere in the educational institution under the joint efforts of the teachers themselves would be totally uncongenial for the growth of this malady. It is a nice preventive check. Whatever we do we must do for the good of the country and the nation. And our primary duty is to stop educational wastage. We must always aim at advancement of learning and spread of education, particularly in the educationally backward areas. In other words, we must have a campaign against illiteracy, and banish it from the country.

The in-service training of teachers is not an unpractical idea. Its success lies in the sense of self-imposed responsibilities of the teachers. Here sincerity and seriousness count much. We plan the lesson schemes and teach the children for the all-round prosperity of the country. The faithful discharge of our duties is bound to uplift society, and the nation is sure to thrive ultimately. If we can successfully train up ourselves in a school of practical difficulties in course of daily routine work, direct our leisure-time activities towards furtherance of our knowledge in subjectmatter, and master the technicalities of the art of presentation, the children under our charge

cannot lag behind, and the country is then sure to make progress, both educationally, socially, and economically. From a teacher I can reasonably expect both matter and manner. Matter must be sound and well-sorted, and manner perfect and well-guarded, so that both the bright and the dull may be benefited, otherwise educational wastage cannot be checked. For the full utilization of the natural resources of the country we, teachers, must shoulder the responsibility of educating children, and help them become good citizens in course of time. A teacher may be unfit at the very start, he cannot be a misfit, provided he is up and doing. Fitness can be easily acquired by self-exertion. It is sincerity that stands for its guarantee.

A Modern Approach To The Study Of History : A Plea

—G. C. Das

The conformity of history to text-book specifications has put it in fetters tyrannical. It no longer remains 'the true poetry' as Carlyle conceived it. From one's early childhood one grows to look on history as 'a confused heap of facts'. At schools and colleges our students have to mug up dates of wars and names of royal dynasties. In all this, one misses the soul of history. Though it is 'a register of crimes, follies and misfortunes of mankind', yet it is a sacred writing, 'for truth is essential to it' according to Cerventes. Truth is apprehended through insight—occasionally, through the penetrating insight of the poet who seems to pierce to the heart of things and to anticipate the verdict of history, as it may fairly be said that Marcell did it in speaking of Charles I and Cromwell. Swineburne also did the same when he wrote Mary Queen of Scots. The tomes which our historians fill with details about the exploits of Kings and conquerors betray a miserable lack of this insight which is really an asset to them. Insight, imagination and impartiality are the three essentials required of a professional historian anywhere. If these elements along with a vital touch of human sympathy come into play to bring the past into life history will, undoubtedly, be what Carlyle or Cerventes thought of it.

It is the age of Marx, Spengler, Wells and Toyanbee. The historian of to-day should take his cue from these masters and renovate the entire art of historiography so that the soul of history may be rescued from its present state of constraint lest it should be crushed out altogether. The fact that history moves in cycles and a writer of history has to deal with civilizations and not with countries and wars should in no case be lost sight of.

Addressing the session of Indian History Congress in Delhi two years ago Pandit Nehru told the historians what history should mean

the context of present-day life and how they should deal with the subject-matter. It would appear that he has stressed the obvious. But he has done so because he practises what he says. In fact, our historians have yet to adapt themselves to the ways suggested by Mr. Nehru who in his books on history has shown a far greater insight into the happenings of the past than many a professional writer of history. Most of these specialists, who write for the enlightenment of the citizens of to-morrow, are lost in the mere accumulation of facts with little or no capacity to interpret or correlate them. A very few of them only can claim to have produced a simple, coordinated account of even a single period in the country's life.* They can render great service to the nation by enabling it to understand its past and present better. This is possible if they undertake the task not as mere compilers of records but as interpreters of the eternal march of events.

The great historian-philosopher Professor Albert Guerard in his fine volume on 'France' has given an excellent definition of history : 'History is the conscious, methodical, critical memory of mankind. It preserves, and often has to recapture, the life of the former days.' Like our own, the life of our forefathers was made up, of suffering and health, of industry, rest and enjoyment, of ambitions and frustrations, of love and quarrels, and in an appreciable measure, of wonders, awe and worship. These things are of imperative necessity 'under the changing pageant of custom'. In all this, governments play a minor role.

Even to-day, conscious as we deem ourselves to be of our civic responsibilities, most of us give little time and less thought to matters of public importance. We mechanically vote every five years on national issues, we glance at a few items of political news in the daily papers, we listen for a few minutes to a radio announcer and have the complacency that we have done our share. One thing is, however, certain that man's chief concern never was to support or overthrow governments. So political history records but a small fraction of our collective experience. To quote Professor Guerard again : 'Political events have their roots in civilization and culture, the sum-total of a people's activities. Detached from these realities, the annals of courts, armies and parliaments would be futile'. Relations between races are generally determined by cultural tradition and

* The most interesting historical work I have read for some years is 'The Wonder That was India' by A. L. Basham (Grove Press Inc., New York, 1954). It is an encyclopaedic survey of the culture of the Indian sub-continent before the advent of the Muslims. It is a profusely illustrated and competently written work of distinction.

this tradition varies greatly in the course of centuries. History, after all, does not simply mean knowing what events followed what.

R. G. Collingwood, whose life's work in the main has been an attempt to bring about a rapprochement between philosophy and history, calls history 'the science of human affairs'. The strivings and rivalries of individuals and groups would be of little significance if we do not discern great issues at the back of their deeds and words. In this context Collingwood observes: 'We study history in order to see more clearly into the situation in which we are called upon to act. Hence the plane on which, ultimately, all problems arise is the plane of *real* life: that to which they are referred for their solution is history.' In rethinking what somebody else thought, the historian thinks it himself. In knowing that somebody else thought it, he knows that he himself is able to think it. Voltaire saw with matchless clarity that if history is to be intelligent it must be all-embracing. 'Man', says G. V. Plekhanov, 'makes his history in striving to satisfy his needs.' This is materialist view of history. According to Dialecticians it is needs that determine man's actions in various walks of his life and this is how the history of a nation is made.

History, too, for all that it has its scientific side in the assembly and evaluation of material, is in the last resort a part of the art of writing. Incidentally, a fine example of such writing we have in a remarkable book* on the study of Indian history by Professor D. D. Kosambi. 'This is how history should be written but seldom is', opines Robert Graves about this book, which amply deserves this praise. The most arresting feature of the book is its novel approach to the study of the subject. It is not an historical work itself, but prepares the readers to study Indian history methodically themselves. Unlike the history of a western country Indian history has taken a tortuous course during the sweep of centuries. Our ancients have left precious little in the way of history. The two epics and the Vedas contain much historical material, but strictly speaking, these are not historical works. We have no Herodotus, Livy or Tacitus. It is, therefore, necessary that special methods should be employed for a systematic study of Indian history. Professor Kosambi's book is an intelligent guide to earnest readers. Knowledge comes only by answering questions, and that these questions must be the right questions and asked in the right order. The writer has followed this line successfully in preparing the book.

* 'An Introduction to the Study of Indian History' by D. D. Kosambi (Popular Book Depot, Bombay-7. 1956)

He has answered the questions that have been agitating the minds of scholars for some time now and has also raised new ones. In this survey of the movement of the course of events from a prehistoric tribal society to the machine age he has been able to reconstruct a fairly full, if not the precise picture of the past considered in all its bearings on the present.

The writer of Indian history has to face heavy odds at every step. The material he has to deal with is vast and is of diverse nature. Only a person endowed with a critical acumen of high degree can perform the irksome task of sifting and scrutiny in search of fact and meaning 'taking nothing for granted or on faith.' In planning the book Prof. Kosambi has considered the economic facts in their social and political background laying an unusually great emphasis on them. This shift of emphasis on particular facts becomes the striking feature because Prof. Kosambi has made it the principal *motif* of the book. He has put too much reliance upon the materialist interpretation of history after Plekhanov. Hence, philosophy and religion which go to form the collective national spirit do not figure in the plan, as they fall in the category of 'pure mysticism'. It makes the book somewhat lop-sided. But for this the volume in question is a notable contribution to modern historiography. Within the well-defined scope of each of the ten chapters the author discusses the persistent problems and topics relevant to the study of Indian history. A chronological outline, sixty-four illustrations (with commentary), and notes make the work really useful and leave nothing to be desired.

In the contemporary world the role of an historian is very great indeed. He grasps the meaning of the past and deciphers the handwriting on the wall of time for the benefit of the common man. The responsibility to deliver the message of history devolves upon him. For example the message of Indian history, as interpreted by Arnold Toynbee in his Azad Memorial Lectures, is to cultivate 'a spirit free from rancour, that is catholic in belief. It sees many in one, and reaches its flowering in non-violence as a belief.' This spirit which belongs to an ancient tradition should survive to fulfil its historic destiny for the well-being of humanity.

Some Observations On Robbins Committee Report On Higher Education In Great Britain

– *Gopal Ch. Bhattacharyya*

The full particulars of the above published (with a few parts of the appendices) on 24-10-63 are as follows :

Cmnd. 2154—Committee on Higher Education. Higher Education. Report of the Committee appointed by the Prime Minister under the chairmanship of Lord Robbins 1961-63.
(MAIN REPORT)

Cmnd. 2154-I Appendix 1 to the Report of the Committee.
The Demand for Places in Higher Education.

Cmnd. 2154-III Appendix 3 to the Report. Teachers in Higher Education.

Cmnd. 2154-IV Appendix 4 to the Report of the Committee Administrative, Financial and Economic Aspects of Higher Education.

PARTS YET TO BE PUBLISHED

CMND. 2154-II-1 ; CMND. 2154-II-2 ; CMND. 2154-IV ;
CMND. 2154-VI ; CMND. 2154-VII ; CMND. 2154-VIII.

England is ever conscious of growing needs of her society and the standards of her education. From time to time, therefore, she sets up various Commissions or Committees for investigation into the problems of education and for suggestions by way of solving those problems. She has also been cautious enough to pass legislations and to implement the recommendations well in time since the days of Forster Act of 1870 which paved the way for free and compulsory education. In 1902 the Balfour Act was passed and Local Education Authorities (L.E.A's) were constituted. In 1918 came the Fisher

Act to clear away the fees in elementary education up to the age of 14. The 1918 Act also made provision for establishment of Continuation Schools. In 1926 Hadow Report came out to suggest that there should be various types of secondary schools including Grammar Technical and non-academic type styled as "Modern School". The 1936 Education Act raised the upper limit of compulsory education to 15. The Spens Report (1938) prepared plan and curricula for a technical type of secondary school. The Norwood Report (1943) made recommendations on the curriculum and examination in secondary schools. The Fleming Report (1943-44) on the Public schools and the General Education System, the Luxmoore Committee (1943) on Agricultural Education and in 1944 came out the Mc Nair Committee on training of teachers and Youth leaders and the famous Education Act of 1944 for Co-ordination and consolidation of various developments in different sectors of English educational system. The Percy Committee (1945) on Higher Technical Education, Lord Soulbury's Committee on salary scales of teacher in Training Colleges (1948). Report of the Secondary School Examination Council (1948), the Education Act of 1948 and many more such other Committee reports and enactments prove beyond doubt that Great Britain never suffers from complacent satisfaction with her progress in national education. As G. Lowndes has aptly observed in his 'The Silent Revolution'.¹ "So long as there is one child who has failed to obtain the precise educational treatment his individuality requires ; . . . so long as the nation fails to train and provide scope for every atom of outstanding ability it can find ; so long as there are administrators or teachers who feel no sense of mission, who cannot administer or who cannot teach, the system will remain incomplete". It is with this vigilance, the people of United Kingdom view their education and they find ample justification in constant review of their education and in appointment of so many Committees now and then.

The latest of such an Educational Committee of Great Britain is the Lord Robbins Committee which was appointed by the Prime Minister of England as per Minute of appointment, Treasury Minute, dated February 8, 1961, "to review the pattern of full time higher education in Great Britain and in the light of national needs and resources to advise Her Majesty's Government on what principles its long term development should be based". The Minute further added that the Committee would, in particular, be pleased to advise Her Majesty's Government "whether there should be any changes in the pattern (of full time higher education), whether any new types of institution are desirable and whether any modification should be made

¹ The Silent Revolution by G. A. N. Lowndes 1955, O.U.P.: P 248.

in the present arrangements for planning and co-ordinating the development of the various types of institution".²

The Committee consisted of thirteen members with Professor Lord Robbins as Chairman and Mr. P. S. Ross of the Treasury as Secretary. The Committee is the first of its kind to make a comprehensive survey on the problems of higher education in Great Britain.³ It has been pointed out in the report that "higher education is so obviously and rightly of great public concern, and so large a proportion of its finance is provided one way or another from the public purse, that it is difficult to defend the continued absence of co-ordinating principles and of a general conception of objectives".⁴ Thanks to the influence of Laissez Faire of democratic England, there had indeed developed various types of institutions including those of higher education, which unfortunately betray even to a casual visitor a lack of a system. The Committee lays down the principle of equal opportunity of higher education to all who are of course qualified for and benefit from it and it has done away with any distinction that might still there be between institutions of higher learning. The Lord Robbins Committee has clearly indicated that it dislikes any 'artificial hierarchies'. As the Report remarks 'Distinction based on adventitious grounds, whether historical or social, are wholly alien to the spirit that should inform higher education'.⁵

According to the estimates of the Lord Robbins Committee the number of places in higher education are expected to increase to 558,000 (say 560,000) by 1980-81, whereas the present number of places (i.e. in 1963-64) as available in the various universities and other institutions of higher learning is 238,000 only.⁶ This expansion will be necessary for the increase in the number of students doing higher education, partly due to more intake of entrants to the Universities and partly due to normal growth of population.⁷ The Com-

² Robbins Committee Report on Higher Education—Her Majesty's Stationery Office, London, 1963-P. 1.

³ "There has never been a comprehensive survey of the field of higher education in the sense in which we have decided to use that term." Robbins Committee on Higher Education : Report : P-4.

⁴ Ibid P. 5.

⁵ Ibid P-8.

⁶ Ibid P-69.

⁷ With regard to expansion of admission facilities, Lord Taylor, by way of answering the critics, remarked as follows:

"Those who are talking rather cruelly about dilution should remember the terribly rough academic standards being applied. Many of us think entry is too hard rather than too easy and that consequently the school curricula are being distorted and young minds are being forced to specialize far too early".

The Times Educational Supplement December 13, 1963, P. 881.

mittee, therefore, recommends that new universities should be established, the present ones should be expanded and a few constituent colleges or such other institutions of higher learning should be given the status of a university. This emphasis on expansion of universities will undoubtedly help England to solve her teacher-shortage problem also by getting many more graduates who will be able to teach in Secondary Modern Schools or streams in comprehensive schools.

The Committee has also adumbrated a new plan for teacher-training programme. It has suggested that teacher-training colleges should come under the department of education of the Universities and would be called as Colleges of Education. This proposal of the Robbins Committee reminds one of Mc. Nair Committee Report of 1944. These colleges will make provision for a four year degree course with emphasis on the study of education and will lead to the B.Ed. equivalent to B.A./B.Sc./B.Com (plus training in Education).

Recently a symposium on Dr. G. B. Konant's book 'The Education of American Teachers' was held in the States. The main proposition of Dr. Konant is that teaching is 'a technical rather than professional pursuit'. This could be discussed vis-a-vis Robbins Committee report in which we find an attempt for rapprochement between the educators and the academicians. Dr. Konant has been criticised for his proposal for 'technique-centered-training' coupled with his emphasis on carefully organised programmes of academic specialisation.⁸

One of Dr. Konant's critic Mr. A. F. Rosebrock says, "A philosophy such as Dr. Konant's which views teachers primarily as technicians in need of instruction in methodology and techniques... does not fit the purposes of a democratic society which seeks to develop creativity and the powers of self-destination". This statement certainly goes in favour of the Robbins Committee proposals. Coming to the area of Indian education, we find the latest trend after the proposal of the Robbins.

All India Association of Training Colleges appointed a study group to examine the existing teacher training programme of India and they have recommended for provision for "4-year-teacher-education-pro-

⁸ The Journal of Teacher Education, Vol. XV, No. 1, March, 1964, 1201. Sixteenth Street, N. W. Washington 36 D.C. p. 20.

⁹ Ibid p. 21.

gramme in arts or science or both as circumstances may permit".¹⁰ The same pattern has been followed in the regional colleges of India. This shows that recent Indian trend in teacher education is comprehensiveness, reconciling the academicians with the professionals and the technicians. The study of Robbins Report for an Indian educationist is therefore all the more interesting.

The Committee has gone into the details of implementation of their main thesis and that is, to produce as much high excellence as possible.¹¹ According to the consensus of the Robbins committee this attempt is absolutely necessary for a country like Great Britain whose 'relative lack of natural resources'¹² makes it imperative in the context of the race of invention and advancement of knowledge in the modern world.

Facilities for higher education therefore, according to the Robbins Committee, should be so expanded that the younger generation gets the scope of training to the furthest limit of their potential ability. In India again we have resources but the man-power is not fully equipped for fullest exploration of those riches.

It has been mentioned in the Report that a Single Grants Commission should be responsible for advising the Government on the needs of all autonomous institutions of higher learning including the new colleges of education.¹³ The Committee has also suggested for a new Ministry of Arts and Science. The only member of the Committee dissenting from this proposal was Mr. H. C. Shearman and his contention was that the present Education Minister could do this additional work with the help of one or two Ministers of State.¹⁴

When we look through the pages of history we find in England a silent social revolution which has been going on since the start of Industrial Revolution, the rigid class system of England gradually giving place to the commoners, farmers, traders and professional men. 'The great public schools' in England like Harrow, Eton,

¹⁰ Report of the study group on the education of secondary teachers in India, Baroda, March 2-7, 1964. Mysore Printing & Publishing House, Mysore, Page-41.

¹¹ Bulletin of the West Bengal Headmasters' Association. Vol. XIII. Jan. 1964. No. 1, p. 13.

¹² Lord Robbins Committee Report on Higher Education, p. 74.

¹³ Ibid. p. 288.

¹⁴ "I submit therefore that a single Minister for Education—or Secretary of State if that title is preferred (though I find it rather less euphonious)—with one or two Ministers of State to assist him is the more satisfactory answer."

—Harold C. Shearman—

Lord Robbins Committee Report on Higher Education, p. 295.

Winchester, Rugby and others or the Universities like Oxford and Cambridge, catered mainly for the sons of upper and middle classes.¹⁵ These institutions were very often criticised for giving indulgence in snobbery and false sense of prestige.

Before the last great World War when Mr. Baldwin formed a cabinet, he said, "I hope to form a Government of which Harrow will be proud." Also during the war period in the Government of Mr. Churchill one could find majority of the members who had been educated at Harrow or Eton. This shows clearly the British tendency which could hardly believe that standard of integrity in conduct could be expected of people other than belonging to the upper strata of the society. In the name of class, wealth or academic standards based on screening through public and University examinations, the doors of the first-grade Universities were open only to a very limited number of school leavers.

The twentieth century England, no doubt has been changing and one could be astonished to see how an Educational Committee headed by a Peer could make such a strong plea for equal opportunity for higher education to people belonging to all ranks.¹⁶ In replying to the critics as Lord Robbins said, in the House of Lords Debates in December Last.¹⁷ The present proportion, for instance, of young people entering higher education from the higher professional families was 45 per cent. The percentage from skilled manual families was 4 per cent. Even in families of the same occupational level the proportion reaching higher education was four times as high from families with one or two children as from those with five or more. The Lord therefore added :

"..... I see no reasonable ground for doubting that the ability is there, if we are willing to use it. What is more I see no reasonable ground for doubting it will come forward if we are willing to help it".

The Lord continued : "If this is true, if there is a likelihood of numbers of the order we envisage actually capable and willing to benefit from higher education, it follows that hence-forward we shall

¹⁵ Contemporary Education by Cramer & Browne, 1956 p. 157. Harcourt Brace & Co. New York,

¹⁶ "Throughout our report we have assumed as an axiom that courses of higher education should be available for all those who are qualified by ability and attainment to pursue them and who wish to do so". Higher education report. p. 8.

¹⁷ The Times Educational Supplement, December 13, 1963. p. 881.

be progressively turning away ever larger number of young people who on present entry standards would have got in". The Lord, therefore, asserted : 'I personally think it is cruel, unjust and unwise

Objections to the findings of the Committee have been raised on the ground that although research and teaching are twin functions of the university teachers, there seems to be a running conflict between them. If a teacher gives more time for teaching, his time for research is curtailed to that extent. As Professor Bush has stated that 'a university is first and foremost a place for expanding knowledge, not just student numbers'.¹⁸ Some people again think that too many students in higher education will be the cause for deterioration of standards of education of the alumni themselves not to speak of research work alone. To this the reply of Lord James is illuminating. He said : "It was unfortunate that the noble idea of high standards was always used as a break and discouragement to expanding opportunity".¹⁹ The Central thesis of the Robbins Committee is that expansion of higher education is possible without lowering that standard of student entry. This of course is yet to be proved and it needs careful watching and waiting after the new system as recommended by the Committee is introduced. The main difficulty, I believe, is want of properly qualified staff in whom both teaching and research will gracefully combine.

Rightly Lord James put it. "The strength of the Universities lay in their combining the work of teacher and research worker under one roof, and often in one man."²⁰ Such efficient teacher, however, throughout the world are not many. Another very pertinent criticism which has been levelled against Robbins is that although their report on higher education is a very 'humane document', sufficient care has not been taken with regard to fostering of creativeness in the scholars of the Universities, rather the emphasis has been laid on economic expectations from tremendous investment of money and brain power in higher education.

Four parts of the Robbins Report have been published so far, six more yet to come out. Meanwhile a great interest has been evinced in India in the findings of the Report, especially because the Union Minister for Education Shri M. C. Chagla referred to the Robbins Committee in one of his speeches and gave indication that similar

¹⁸ The Times Educational Supplement, Feb. 14, 1964. Editorial page.

¹⁹ Ibid, December 13, 1963.

²⁰ Ibid. p. 881.

measures might be adopted for our future educational planning. Nobody can deny that a well integrated plan for India's education is badly needed, but ours is a different story in the sense that we have a big population, we have not as yet introduced fully free and compulsory education in all parts of the country. We are still struggling against poverty, unemployment, rural backwardness and industrial under-development, and our tertiary education by and large has not made much improvement on the basis of progress left by 1854 Education Despatch.

While we are recently having reports on several educational enquiries carried out in an advanced country like Great Britain,²¹ we feel our need for such enquiries in all sectors of our national education all the more. The recent appointment of a high power Committee on educational planning of India with Dr. Kothari as Chairman is therefore highly welcome.²² The Country would be eagerly looking forward to their findings.

²¹ The following are some of the reports which had been published towards the end of 1963 in Great Britain.

- (1) Lord Robbins Committee on Higher Education.
- (2) Report of the Central Advisory Council for Education (England) under the Chairmanship of Mr. J. H. Newson. The enquiry was concerned with the education of children between the ages of 13 and 16 of average and less than average ability.
- (3) Report on a Survey of women teachers which was carried out by Prof. R. K. Kelsall.

²² Current Education Literature, Central Secretariat Library, New Delhi.
Vol. 6, No. 4, April, 1964 PP. 3-4.

An Intention Timetable

Alternative for the Secondary Schools

—R. T. Rivington

Traditionally, the timetable in Secondary Schools is divided by subjects. Such a division of work is helpful for several reasons for example, because of teachers' past academic experience, and because it is easy to measure achievement by examinations in subjects. One can also ensure that the knowledge it is considered essential for pupils to learn is taught, particularly that needed for the narrower entrance requirements of university departments.

What knowledge is essential becomes an open and difficult question when we think outside the subject divisions. Ultimately specialization is necessary ; but does the subject division of work always provide the best preparation for it, and develop a well-educated man at the same time ?

AIMS AND PURPOSES

One might ask whether, for part of the course in a secondary school, a timetable blocked or framed not for subjects but for purposes or intentions pursued in the work would be a valuable addition to the pupils' educational experience. Good teachers inevitably pursue a diversity of purposes in their work ; but such a timetable might be formed by biasing the intentions pursued in different directions at predetermined times. These intentions would become the basis of the timetable.

Two groups of purposes or objectives in education might be distinguished. First, there are those of establishing personal relationships, as between pupil and teacher ; these are the simplest social and pastoral purposes of education and will be found even in societies where there is no formal education.

Secondly there are the objectives or purposes of tasks given to pupils for educational reasons. To these may be added, though they

are not of the same class, the objectives of acquiring facts and skills for actual occasions.

Different in nature from either of these groups are statements, some important, which make value judgements about the purposes of education. A study of the second group of objectives might yield an interesting analysis of intentions in tasks given for educational reasons, and thus makes divisions for a timetable based on intention, on something like the following lines :

ACADEMIC : Training in administrative or clerical skills ; in order and planning ; in precision and clarity ; in rigour ; in efficiency, including that in acquiring and retaining facts.

IMAGINATIVE : The awakening of the imagination, which is to be found in a heightened awareness ; the education of the imagination, which is the discipline of expressing this awareness by whatever means, for through expression may come a greater understanding of the original awareness. The intention might be pursued not only in painting, writing, music and drama ; but through integrating work in content from many, indeed most subjects.

Practical: Problems in the handling of materials, or work in which these will occur. This work would include not only content from craft subjects presented for this purpose (other craft-work, by this analysis, might be 'academic') but also problems that might be found in science, games, hobbies, outward bound work, etc., and a purposeful relationship could be made between different kinds of content.

DIALECTIC: The search for truth and testing of opinions by discussion. This would be work in which the aim is to provide materials for discussion, and experience and practice in discussion, particularly in groups. It would include the study of the meanings of words, intention and extension, classification compatibilities, the nature of evidence, fact and opinion, and the study of rhetorical devices such as, for example, the judicious uses of 'public' and 'formal' language and devices found in mass media. Any content might be used as was mathematics in examination by 'Wrangling' ; but the most useful content might be a study of the family, work, money, leisure and primary human groups. For this special material planned for its flexibility might be helpful.

Is it possible these intentions correspond with four primary and basic aptitudes, required in combination or singly for tasks done by

anybody at any point in life? Are there any tasks that can not be analysed thus? By setting ourselves such a question, we might begin to relate work done after leaving school to schoolwork, to introduce logically and meaningfully into a timetable some 'real' work from outside the traditional content of the curriculum, and begin a fresh and determined study of 'transfer'.

The understanding of work in intention divisions might show a pupil how, after leaving school, work or experience of any kind might be made educationally meaningful. It may be that pupils after reaching the age at which they can form abstractions, tend locate and test different aptitudes corresponding with these intentions for themselves until at about the age of 16, they begin to search more for, and recognize, the adult interests which will become part of their individuality. Such aptitudes appear to be the abilities by which we organize and create work on our own. If recognition of them is a phase in development in a good educational environment, might they not be studied and made more overt use of in educational design? A school must have system and order in the planning of curriculum and timetable. An intention timetable should provide as good a design as a subject timetable, and if well-done might make a better organisation for work. Ideally, in subject teaching the intentions coalesce, and pupils therefore should have had some experience of them, even though they or their teachers may have not recognized them as such.

FOUR DIVISIONS

In an intention timetable there might be four divisions of work, each based on one of the intentions suggested. Work in each intention division would be biased or directed towards the pursuit and fulfilment of that intention; natural interrelationships with other intentions would appear and be recognized. Teacher would select the content as that with which they would most successfully pursue the intention with each particular group. The aim would be to create environments or situations in which experiences of the intention would become understandable to the pupil through the work done.

Three or four teachers might teach the same form at different times with the same intention, diversifying the content yet working as a team. Some teachers may prefer to use traditional subject-content for the most part; others gasping at the possibilities of intention work, might begin to introduce content from well outside the conventional curriculum. Certainly much rethinking of subject

content would be invited, and careful planning and discussion of the programmes would be necessary.

Where would an intention timetable be of most use? Only experiment could decide this. The problem is one of development, and much of development depends on the social system and environment. An intention timetable might be helpful near the culmination of school experience, to give greater meaning to education, and to point towards 'transfer' of ability in real life. If as now may be possible, universities become less exigent in their narrower requirements for entrance, it might be used in grammar school work.

Intention work might be of most general value at the ages of 15-16; but present examination requirements, not least those now increasing in secondary modern schools, might impede its application at this level. In a grammar school, it might be used in the second and third years to provide some remission from wholly subject-based school course, or it might be used for one term out of three for every school year.

MORE DIFFICULT.

Success might depend on finding teachers able to organize and inspire work in each intention department, particularly for heads of department able to grasp the concept of intention, to rise to the challenge offered and to initiate work among a team of teachers. Responsibility of this kind would be greater than in subject teaching. Teachers might helpfully choose to spend more time in work for some intentions and less for others, according to their personal bent. The intention department might be autonomous and work out their own programmes within the time allotted to them.

The individual school would have to determine how the time should be divided, perhaps into four periods of a day or a week for each intention. If there is certain amount of content that would be regarded as essential for certain reasons, it should be kept to a minimum, and place in the programme for one of the intention divisions, leaving the teacher free to use as much as possible of the content with which he most successfully fulfils the intention.

The essential work might be covered quickly and efficiently in the academic division. In this department might also be included if suitable, some objective training in examination passing, and it should certainly include some experience of covering as much ground in as short a time as possible by careful planning. Streaming should

be less necessary than in traditional subject work, and because of the opportunities for group of individual work, progress might indeed be greater for not having it. The design of the curriculum might induce not only teachers, but pupils also, to develop initiative in introducing fresh content into it.

IN TRAINING COLLEGES

This suggestion for an intention timetable is based on supposition, and if the experiments were made, only competent and secure schools should attempt them. But thinking along these lines may disclose other possibilities. Educationists in training colleges, for example, might do more to develop a discipline of analysing the purposes of every part of subject material.

It is difficult to separate subject from education, but such an exercise might be in the value in the educational part of the proposed B. Ed., for the content of both schoolwork and college subjects. The work for this degree might well require methods for greater critical scrutiny of subjects and their content, and suggest analyses in ways other than we are, through tradition, accustomed to Dr. Taylor's recent book. The Secondary Modern School should make us aware how our thinking in this field may become obstructed by outside influences.

Most attempt at curriculum reform are based on the subject, a defined area of knowledge. Even when the exploration is of 'bridges or borderlines' between subjects, 'centres of interest' or 'topics' an area of knowledge defines, and determines the centre of the work. Even in practical work one can think so easily in terms of the area of knowledge of a skill. We are accustomed to thinking of a dichotomy between 'subject-centered' and 'child-centered' work. It might be helpful to become more aware of a third approach to curriculum formation, 'purpose-centered' work.

[Courtesy, The Times Educational Supplement, March 13,1964]

BOOK REVIEW

Political Philosophy of Sri Aurobindo : *Dr. Viswanath Prasad Varma ;
Asia Publishing House*

Sri Aurobindo, as Dr. Varma says, is 'one of the titanic minds of the modern world'. His contributions in the fields of Literature, Philosophy, Politics, Sociology and Yoga constitute a treasure of thought which is yet to be excavated. Of course, there are many works of distinction on his philosophy and among them those of V. Chandra Sekharam, H. Choudhury, N. K. Gupta and S. K. Maitra deserve special mention. Nevertheless a systematic study of Aurobindo's political ideas and ideals was wanting till the publication of this work by Dr. V. P. Varma in 1960. A distinguished scholar and an eminent educationist Dr. Varma, has a wide range of study in History, Philosophy and Political Science. With his vast knowledge and scholastic inquisitiveness, he studied Sri Aurobindo for 16 years since 1942 and produced this volume in 1958. As a research dissertation, the book is a superb analytical and comparative study of Sri Aurobindo's political thought where Dr. Varma brings in comparison with Sri Aurobindo a galaxy of authors and thinkers of all the ages from ancient to modern.

Dr. Varma takes great care in arranging the scattered elements of Sri Aurobindo's social and political thought in the following order. He begins with an elaborate analysis of Sri Aurobindo's philosophy of history and his theory of civilisation and culture in the first two chapters. Then actual political thought is dealt with. He discusses Sri Aurobindo's theory of nationalism and the ideal of human unity elaborately and attempts to explain some fundamental concepts of his political thought like social philosophy, philosophy of the State,

anarchism, democracy etc. His criticisms of Benthamite Utilitarianism Capitalism, Socialism and Communism are also summarised.

Sri Aurobindo's concept of freedom has a new basis. According to him real freedom and equality can be achieved only in a spiritual context and not in any material or constitutional set-up. When man becomes sovereign of himself by supramental transmutation, he learns to be spiritually one with his fellowman and in that society of individuals, morally and spiritually free, law becomes, 'the child of freedom'. This spiritual individualism is the key-note of Sri Aurobindo's political thought.

Another dominant ideal in Sri Aurobindo is his theory of nationalism and ultimate human unity. Nationalism is to him a 'Dharma' in the Indian sense of the term, the exact connotation of which cannot be found in the English word 'religion'. Nation is the manifestation of the Divine Mother and a grown-up stage in the process of spiritual evolution, the mankind has so far reached. Sri Aurobindo has a profound respect for the ancient spiritual, intellectual and vital achievements of the Indian peoples. Though he is influenced by Hegel and Renan in his theory of the nation-soul and psychological unity, he believes that the message of Indian culture and civilisation provides a broad basis for world Unity and universal peace. The political independence of India is an imperative necessity for the spiritual emancipation of the mankind. A similar idea is reflected in the political thought of Tagore, but I am constrained to say that Dr. Varma has not utilised sufficient space for comparing the thought structure of these two giant personalities. In the appendices he has quoted the opinions of two great leaders C. R. Das and Bipin Chandra Pal, on the political philosophy of Sri Aurobindo, and compared the political thought of Lokmanya Tilak with that of Sri Aurobindo. If he had taken a little more trouble to compare the political thought of Tagore and Aurobindo in another appendix, the readers would have appreciated the attempt.

Another point is to be mentioned on Sri Aurobindo's theory of nationalism as analysed by Dr. Varma. Going through the pages of this chapter, I cannot but feel that Dr. Varma has not laid proper stress

on the facts of Sri Aurobindo's life. His transformation from an extreme nationalist leader to a mystic spiritualist thinker has a great bearing on his political philosophy and theory of nationalism. The relation is not sufficiently clear from Dr. Varma's purely theoretical treatment of the concepts of Sri Aurobindo.

Nevertheless, Dr. Varma with his scholastic analysis brings home to the readers three main tenets of Sri Aurobindo's political philosophy—spiritual individualism, economic socialism and internationalism. The solution of political problems through spiritual means which is traditionally Indian is also lucidly explained and thoroughly reviewed. In this respect the superiority of the Indian idealist is clearly established when compared with his western counterparts. Dr. Varma's study of Sri Aurobindo opens a new horizon to the students of the Idealist Political Philosophy.

—Banikantha Bhattacharyya

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**Village India (Edited by Mckim Marriot) : Asia Publishing House,
Indian Edition 1961**

This volume contains eight papers which delineate the social political and economic conditions of eight Indian villages and analyse the pattern of social changes that these Village Communities have been undergoing. To be precise, these papers are anthropological studies in the 'little communities' of India.

The contributors to this volume have selected eight out of 'about half a million villages in India'. This is likely to convey to the reader an impression that these eight villages are representative of

all villages in India. But in the foreword to the book it has been conceded that 'it would be foolish to claim that what we have here is a representative sample'. It will not be too much to say that no two villages in our country are twins. But there are certain common features of Indian rural life. Social stratification based on the caste system, economic and political predominance of the land owning class, factional feelings of different sections of the community and their solidarity on festive occasions, and the gradual break down of caste barriers in recent times are the facets of the social structure in any and every Indian village. The papers in this volume impart to the reader a searching view of these main features of village communities in our country. Hence, though only eight villages have been chosen for purposes of the anthropological study of Indian village communities, yet the reader gets an analytical description of the outlines of the social fabric of rural India as a whole. Nevertheless, the reader is likely to be curious to know why the contributors to this volume have selected eight particular villages and not any other. It is a sad reflection on their strategy that while they have selected four villages from Southern India, they have taken none from Eastern India for purposes of studies in Indian communities. The approach to the anthropological study of Indian village communities would have been more balanced had greater consideration been given to the matter of selection of villages.

It is to be highly appreciated that the papers are based on materials gleaned from fieldwork done in eight villages. The reader gets an authoritative account and not a bird's-eye view of the social order in each of these villages.

In the paper 'the Social System of a Mysore Village' Mr. M. N. Srinivas has made a precise but penetrating analysis of the social system of Rampura. Each caste in Rampura is 'traditionally associated with the practice of a particular occupation'. This does not imply that all the members of a particular caste follow a particular occupation. But the members of each caste are supposed to have specialised skill required for the calling with which they are

traditionally associated. However, it is to be borne in mind that members of any caste do not firmly stick to their traditional calling. The observation of Mr. Srinivas on the occupational division between different castes in Rampura applies equally in the case of any other Indian village.

Mr. Srinivas has also described the traditional economy of Rampura. Money used to play a very insignificant part in it. Barter system was its hall-mark. Even to-day the economy of Rampura has not its traditional features. However, money has been playing an important role since the time of the Second World War. This again is equally true of any other Indian village. In course of describing the traditional economy of Rampura, Mr. Srinivas has suggested that agriculture imparts stability to the social system of Rampura. With the growing pressure of population the occupation associated with any particular caste becomes overcrowded. Consequently, the occupational aspect of the caste system, and with it the social system based on the caste hierarchy, shows signs of cracking. But as agriculture provides employment to all castes, the surplus persons in any caste take up agricultural pursuits, and thereby the threat to social stability is averted. This is a misleading argument. As agriculture draws off 'the surplus persons in nonagricultural castes' it begins to wilt under the pressure of population. Per capita income of persons engaged in agriculture falls and so surplus agricultural labourers are forced to take up new occupations or alternatively, to move to urban areas.

Mr. Srinivas has made a streamlined analysis of the caste hierarchy in Rampura. Social stratification on the basis of caste inequalities is the essence of the social order in Rampura. But there is no complete segregation of castes. For persons belonging to different castes are brought into one fold through social institutions like tenentship, debtorship and clientship. Despite the existence of the caste hierarchy, every resident of Rampura is fervently loyal to the village community. The unity of the villagers is best expressed on festive occasions and in ritual contexts.

Kathlen Gough has analysed the rapid transformation of the social structure of Kumbapettai, a village in Tanjore. Mr. Srinivas has portrayed how the social structure of a village has stood the test of time because of its flexibility. There have been changes in Rampura. But the social system persists through its institutions which have undergone modification from time to time. In Kumbapettai, on the other hand the social system is in the process of radical transformation. The old economy of Kumbapettai, like that of Rampura, was feudal in character. The caste hierarchy was also there in Kumbapettai. But to-day it wears an entirely new aspect. The feudal economy is being swept off by the fast growing capitalist economy. Economic changes have impinged on the pattern of social relations. Economic classes have now replaced traditional social grouping. The competition between castes has ceased to be significant political organization has accelerated the breakdown of caste barriers. The upshot is that the social structure of Kumbapettai is shortly going to change beyond recognition under the pressure of economic and political forces. Miss Gough has given us the picture of a dynamic village community. This is in sharp contrast to the relatively stationary social system described by Mr. Srinivas.

Though Miss Gough has carefully described the process of transformation of the social structure of Kumbapettai, she has not done justice to the part played by non-economic factors in bringing about this radical change.

The paper 'The Changing Status of a Depressed Caste' depicts how the *camars* of Madhopur, a village in Jaunpur District have striven to raise their social status. The *camars* had for a long time been under the economic and political subjugation of the Thakur landlords of the village. Attempts were made by them from time to time to achieve a higher social status by acquiring political power through elections. They succeeded in their efforts in 1948 when they won the elections for panchayats. More important than the political victory of lower castes is the social change that has occurred in Madhopur. Camars have struggled to raise their status by imposing

restrictions on their habits of diet, dress and occupation. While the higher castes have become considerably indifferent to the 'traditional symbols of caste status' under the influence of the western cultures, the *camars* have developed a strong caste-consciousness. Moreover, whereas the higher castes are growing apathetic to orthodox Hinduism, the *camars* are becoming more and more devoted to the Sanskritic religion. In this paper, which is based on reports by Bernard S. Cohn, we get not only an account of efforts made by *camars* to improve their social status but also a description of the opposite transformations of social and religious sentiments of lower and upper castes.

Mr. Alan R. Beals has discussed 'the interplay of factors of change' in Namhalli, a village in Mysore. Prior to 1876 Namhalli was an isolated village unaffected by external influences. The social structure of Namhalli began to take a new shape after 1876 under the influence of six factors: (1) gradual replacement of local authority by the authority of the State Govt., (2) rapid growth of population, (3) emergence of the money economy, (4) development of the communication system and expansion of trades, (5) development of manufacturing industries and political organization, and (6) diffusion of education and adoption of public welfare measures. Mr. Beals has analysed how these six factors acted and reacted on one another to cause a rapid and significant change in Namhalli.

Gitel P. Steed has made an approach to a study of personality formation in a village. She has taken Kasandra, a village in Gujarat, as her object of study. But truly speaking an individual and not a village is the subject of her paper, she has critically examined the formation of personality of Indrasingh, Vaghela Rajput landlord of Kasandra. She has analysed how Indrasingh has developed a personality of his own through his persistent efforts to adjust his inner interests to demands made on him by village institutions and at the same time to lead a private life according to dictates of his conscience. Incidentally, she has also drawn a picture of the social structure of Kasandra. Although Mrs. Steed proposes to make a study of the

personality formation in a village, she surprisingly keeps her attention confined to a particular individual. She sidetracks the issue of the formation of group personality. Moreover, the reader may beg to differ with Mrs. Steed's definition of personality. In her view personality reflects only 'responses to inner interests ;' 'responses to outer demands' have no bearing on the formation of personality. It cannot be gainsaid that a man's behaviour is moulded not only by responses to inner interests but also by responses to outer demands', particularly when these outer demands' persist for a sufficiently long time.

Prof. Lewis has made a comparative study of Tepoztlan, a catholic village in Mexico, and Rani Khera, a Hindu village near New Delhi. Both are peasant societies, yet they differ widely as regards their social organizations. The social system in Tepoztlan is essentially urban in character ; that in Rani Khera manifestly rural. Politically Tepoztlan is more organised than Rani Khera. But in one respect Rani Khera is less primitive than Tepoztlan. Despite its relations with other Mexican villages, Tepoztlan is an isolated unit in the sense that its people do not make social contacts with the people of any other village. Rani Khera is closely tied to neighbouring villages by bonds of caste connection and intermarriage. Prof. Lewis has vividly described the contrasts between social organizations of Tepoztlan and Rani Khera. This enables the reader to have glimpses of two differnt social systems against the common background of a peasant economy.

In the paper 'Little communities in an indigenous civilisation', Mr. Mckim Marriott, editor of this volume, has sought to discuss whether an Indian village is a complete world in itself or whether it represents the greater culture and society of which it forms a part. He has considered the issue in the context of Kishan Garhi, a village in Aligarh District. While others have laid stress on the isolated development of particular villages, Mr. Marriott has dwelt upon the interrelation of the development of Kishan Garhi with the growth of the Indian society as a whole. He turns his eyes from the village to

the State of which it is a part and then from the State to the village to discover how far Kishan Garhi represents the Indian civilisation.

The social system of Kishan Garhi reflects the impact made by the greater community on the little community. On the other hand, the development of the 'native Indian Govt.' has, to some extent, been influenced by political institutions of little communities like Kishan Garhi. Mr. Marriott has concluded that the little and greater communities are mutually dependent on each other for their existence.

He has carried the discussion to the religious sphere also and outlined the modification of orthodox Hinduism under the impact of local religious rites and the orientation of local religious rites under the influence of the Sanskritic religion. He has named these two processes as 'universalization' and 'parochialization'.

Mr. Marriott has made a rational approach to the anthropological study of little communities. A study of the interaction of the little and greater communities is indispensable for a thorough understanding of a village community.

The paper 'The world and world view of the Kota' written by David G. Mandelbaum, offers a comparison of the eight village communities described in this volume. Mandelbaum's object of study is the Kota society. The Kota villages are situated in the Nilgiri District of Madras. Not long ago the Kota villages were self-contained and isolated. To-day the Kota community is not totally separated from the greater community. Of late the streams of the Indian and the Western culture have flowed over the Kota society.

Mr. Mandelbaum has given an account of the Kota outlook on life. He has graphically described the emphasis that every male Kota lays on the maintenance of his social status. After dealing with the different aspects of the social life in Kota villages, he has made a comparative study of the eight village communities mentioned above.

To conclude, this volume helps the reader to have a grasp of the traditional Indian civilisation in its different facts. The indigenous civilisation of India is indubitably a rural civilisation. One can have a view of the Indian society and culture only through a study of village communities.

— *Arun Kumar Gangopadhyay*

Educational News—home and abroad

Commission to Survey Education

The Central Government has appointed on July 27, 1964 a 16 member commission to go into all aspects of education in India and announced its terms of reference. The Commission headed by Dr. S. Kothari, Chairman of the University Grants Commission includes five eminent educationists from abroad among its members. Some leading foreign scientists and educationists will also be associated with it as consultants. The Commission is expected to submit its report by March 31, 1966. If it submits any interim report, dealing with any specific recommendations, that will be implemented immediately. This Commission will advise the Government on the national pattern of education and on general principles and policies for developing education at all stages and in all its aspects.

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Study Group to examine organization and programme for Training of Secondary Teachers

The National Council of Educational Research and Training in collaboration with the All India Association of Principals of Training Colleges recently sponsored a study group to examine the existing organization and programme for the Training of Secondary Teachers and formulate measures needed to be undertaken in the context of forthcoming Plan requirements. The group considered several important problems and submitted their recommendations. Some salient recommendations are as follows : (1) the Government of India should establish a National Council of Teacher Education, (2) there should be constituted in each State a State Council of Teacher Edu-

cation ; (3) A Master Plan of Teacher Education be prepared for each State for the Fourth Plan period. (4) Four-year Degree course in Education should be introduced ; (5) A comprehensive in-service programme of Teacher Education both for secondary teachers and teacher educators be made, (6) Research in Education should be the concern of every teacher training institution. (7) All teacher education should be free and the entire cost should be borne by the Central Government and the States concerned. (8) Correspondence course for untrained teachers already in service.

Plan to wipe out illiteracy

The United Nations Educational Scientific and Cultural Organization has undertaken a vast programme in Asia, Africa and Latin America to wipe out illiteracy and develop a normal educational pyramid by 1980.

The Indian National Commission for co-operation with UNESCO has urged that UNESCO at its next general conference in October, should take up as an urgent project the abolition of illiteracy in the areas of overwhelming illiteracy in the world.

The Commission, which concluded its two-day deliberations under the Presidentship of Shri M. C. Chagla, Union Minister of Education, said that the conscience of the world should be aroused and world resources mobilized in a campaign to reduce illiteracy to minor proportions in a comparatively short period of time.

Discussing the draft programme of UNESCO for 1965-66, which will go before the general conference in Paris in October, the Commission endorsed Shri Chagla's plea that UNESCO assistance for education should give top priority to teacher-training programme, science and technical education particularly at the secondary level, strengthening of higher education through centres for advanced materials specially text-books and audio-visual aids.

International Assembly for early Childhood Education

The tenth International Assembly for early childhood education took place in Stockholm, Sweden, from August 12 to 18, 1964. The Assembly was arranged by the World Organization for early childhood education, or O.M.E.P. from the organization Mondiale Pour l'Education Prescolaire.

The theme for the tenth Assembly was "Children in a rapidly changing world". Three main subjects presented in lectures were: The problems of children in developing countries; Children in high houses and crowded streets and the need for early planning; and the changing family situation.

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Shakespeare Exhibition

The Shakespeare exhibition was opened on April 23, 1964, the 400th anniversary of his birth, in a special pavilion erected on the river bank opposite of Royal Shakespeare Theatre in Stratford-on-Avon. It remained there till August 5. It will reopen again on October 26, on the site of the National Theatre on the south bank of the Thames. It is one of the major events planned for this quarter centenary year. Painters, sculptars and designers were engaged for reconstructing the poet's life against the background of his times.

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Hypnopedia on Way

A council for the application of cybernetics in education has been set up in Soviet Union. It includes 200 scientists headed by academician Axel Bug, an authority on cybernetics. All the major establishments of higher education in the country have already started to introduce cybernetics machines into the study process,

according to Professor Vladinir Artyonov, a member of the council. Specialists in Novosibirsk, Kiev, Uzhgorod, Tbilisi, Gorky and other cities are working out methods for hypnopedia i.e. teaching during sleep.

GLEANING

Parents as a school resource—*Uldarico Viary*

Parents are the best resources for studying children's ways of living, their methods of home study, their ways of doing things etc. Tapping parent resources is one way of winning their good-will, co-operation and interest in the school work. Teachers seeking to tap parent resources will do well to note that: (I) Parents appreciate occasional social calls of teachers and love to hear about the work of their children in the class. They feel proud when teachers come to them and talk to them about good little things their children are doing in the school ; (II) Parents are always glad to co-operate with teachers in removing the limitations of the school and helping it reach its goal ; (III) Parents are more than willing to co-operate provided they are given a clear view of the teaching-learning process and their duty in relation to the school is clearly defined ; and (IV) They love to sit with teachers and discuss with them in an atmosphere of common interest and partnership, the proper steps to be taken towards the improvement of the children. When interest is once aroused in parents, they will go out of their way to help the school, no matter how poor they are and how hard-pressed for time.

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Self-Discipline is the best discipline—*Victoria Wagner*

Children instinctively learn social responsibility and obedience. Self-discipline in school can grow only in a climate that is basically friendly and instinct with mutual respect and confidence. To help pupils develop self-discipline teachers should: (i) establish cordial

relations with new entrants to the school so that they may adjust easily to the school atmosphere and feel at home ; (ii) be fair, honest and frank with them if they are expected to reciprocate courtesy ; (iii) introduce rules for the control to reciprocate courtesy ; (iii) introduce rules for the control of their speech and sociability ; (iv) punish them only when necessary ; and (v) encourage student self-government so that they may know what is responsibility.

[Courtesy: Indian Education Abstract.]
